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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01000

GENERAL

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SECTION 01000

GENERAL

PART 1 GENERAL

1.1 ORGANIZATION OF SPECIFICATIONS

The specifications which govern the materials and equipment to be furnished and the work to be performed under this contract are listed in the Table of Contents. No attempt has been made in the specifications to segregate work to be performed by any trade, craft, or subcontractor. Any segregation between the trades or crafts shall be solely a matter for agreement between the Contractor, Contractor's employees, and subcontractors.

1.2 SUBMITTALS

Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-04 Drawings

Utility As-Builts; FIO

The Utility As-Builts are described under paragraph SURVEYS.

SD-08 Statements

Designated landfill; GA

The Contractor shall select the locally operated landfill as described in paragraph DISPOSAL OF DEBRIS AND WASTE.

Dewatering plan; FIO

The submittal requirements are described in paragraph DEWATERING OPERATIONS.

Shoring plan; FIO

The submittal requirements are described in paragraph SHORING.

1.3 MEASUREMENT AND PAYMENT

The Contractor shall be responsible for the work of this section, without any direct compensation being made other than the payment received for contract line items on the bidding schedule.

PART 2 PRODUCTS

2.1 APPROVAL OF MATERIALS OR ALTERNATES

Requests for approval of materials and products, or substitutes thereof, will not be considered prior to award of the contract.

2.2 WARRANTIES

Any items that are submitted for review or approval of the Contracting officer should include a copy of the manufacturer's standard warranty if one is available.

PART 3 EXECUTION

3.1 GROUNDS AND ROADWAYS

3.1.1 Availability of Grounds

The boundary limits of the grounds made available for the Contractor's use during the life of the contract are shown on the drawings. Any additional rights-of-way or grounds desired by the Contractor shall be obtained by the Contractor at its own expense, and copies of agreements for the use of such rights-of-way shall be furnished to the Contracting Officer before entering thereon. Such agreements shall clearly relieve the Government of any responsibility for damages resulting from the use of the grounds.

3.1.2 Drainage Facilities

Insofar as natural drainage from the protected areas is obstructed by contract operations, it shall be the Contractor's responsibility to make adequate provision for accommodating such drainage in a satisfactory manner during the life of this contract, either by temporary means or by use of the permanent construction and operation of the permanent facilities.

3.1.3 Roadways

3.1.3.1 Traffic Hazards

When continuous haul operations or other condition created by the Contractor's operations result in interference or hazard to traffic on streets and highways, beyond that of ordinary public usage, the Contractor shall erect warning signs and provide flagging services as necessary to safeguard the public as required in Section 01500 TEMPORARY CONSTRUCTION FACILITIES.

3.1.3.2 Haul Routes

The Contractor shall be responsible for securing all permits required along haul routes. The Contractor shall be the sole permittee and shall be responsible for meeting all obligations of the permits. A copy of each permit shall be submitted to the Contracting Officer. The Contractor, as between the Government and the Contractor, has sole responsibility for damage or deterioration of the Contractor's haul routes. Dust control shall be provided as stated in Section 01410 ENVIRONMENTAL PROTECTION.

3.1.3.3 Road Closures

The Contractor shall be responsible for coordinating road closures and detours with the appropriate juridictions.

3.2 DISPOSAL OF DEBRIS AND WASTE

The Contractor's attention is directed to Section 01410 ENVIRONMENTAL PROTECTION and to the following Section 00700 CONTRACT CLAUSES: PERMITS AND RESPONSIBILITIES; PROTECTION OF EXISTING VEGETATION, STRUCTURES, UTILITIES, EQUIPMENT, AND IMPROVEMENTS; OPERATIONS AND STORAGE AREAS; and CLEANING UP. Burning will not be permitted at the project site and debris or waste shall not be left on the site. Disposal of clearing and grubbing debris shall be by one of the following methods:

3.2.1 Disposal Offsite For Useful Purposes

In the interest of conservation, it is required that the Contractor make a reasonable effort to dispose of the material offsite for some useful purpose. Timber may be cut into convenient lengths and utilized for making saw logs, posts, cordwood, wood chips for paper making or other uses, or other similar use.

3.2.2 Disposal In A Locally Operated Sanitary Landfill

Contractor shall dispose of sanitary landfill material in the City of Grand Forks landfill. The Contractor shall secure the required permits for disposal and provide copies of the permit to the Contracting Officer. The Contractor shall be responsible for all tipping fees.

3.2.3 Disposal of Solid Construction Debris and Waste

Disposal of solid construction debris and waste shall consist of removal from Government property and disposal in compliance with Federal, state, and local requirements for solid waste disposal. Contractor shall dispose of solid construction debris and waste material in the City of Grand Forks landfill. The Contractor shall be responsible for all tipping fees.

3.3 EXISTING UTILITIES

3.3.1 Work by Others

Relocation of existing utilities will be the responsibility of the utility companies. This includes moving or lowering such services as gas line, underground power and communication lines, sanitary sewer, water main, and overhead power lines.

The Contractor shall coordinate construction activities with relocation requirements of utility companies. The Contractor shall make payment to the utility companies for all services, fees, and permits required to relocate and reestablish service for utilities relocated for convenience of the Contractor's operations. The Contractor shall be responsible for all costs related to protecting existing and relocated utilities. The Contractor shall coordinate with the utility representatives listed in Attachment A following this Section.

The City of Grand Forks and private utility companies are responsible for relocating existing utilities that penetrate through or under the new levees and closure structures and existing utilities that conflict with new facilities constructed under this contract. The Contractor shall coordinate with the City of Grand forks and the utility companies to ensure that relocation of the utilities is performed without causing delay to the project.

3.3.2 Buried Utilities

The approximate locations of known existing buried utilities are shown on the drawings to the extent of available information at the time the drawings were prepared. (In general, no service connections are shown.) Prior to commencing excavation, the Contractor shall accurately locate all such installations. In the event the Contractor damages any existing utility lines, report thereof shall be made immediately to the Contracting Officer. If the Contracting Officer determines that repairs shall be made by the Contractor, such repairs shall be performed immediately. The costs associated with repairs shall be borne by the Contractor.

3.3.3 Interruption of Services

Utility services shall not be interrupted except for brief periods to facilitate cut-ins. The Contractor shall provide temporary service and shall relocate existing utilities as required to construct the work shown and insure uninterrupted service. If interruption of services is unavoidable, the Contractor shall request approval in writing at least 30 calendar days prior to the proposed interruption. This submittal shall fully describe all details of proposed interruption and the reasons why alternatives are not feasible. The Contractor shall further coordinate with the owner of the utility and notify affected consumers at least 10 calendar days in advance of interruption of services. The Contracting Officer will not in general approve proposals which require interruption of services for more than 4 continuous hours.

3.3.4 North Dakota One Call Excavation Notice System

For contract work performed within the State of North Dakota, the Contractor shall meet the requirements of North Dakota Statutes, Chapter 42-23 "One Call Excavation Notice System." The North Dakota One Call notification center telephone numbers are:

Hotline	800-795-0555
Main Office	701-223-9380

3.4 SCHEDULING

3.4.1 General

It shall be the responsibility of the Contractor to schedule and execute the work, incorporating the necessary requirements set forth in these specifications. The Contractor shall develop and submit a schedule in accordance with Section 00800 SPECIAL CONTRACT REQUIREMENTS: SCHEDULES FOR CONSTRUCTION CONTRACTS.

3.4.2 Notification

The Contractor shall inform the Government in writing within 5 days after receipt of notice to proceed and before work begins as to which hours of the day and days of the week work under this contract will be performed. The Contractor shall notify the Government at least 24 hours before work is to be conducted on overtime, in multiple shifts, on weekends, or on Federal Government holidays.

3.4.3 Work Hours

The City of Grand Forks has a noise ordinance. In accordance with the noise ordinance, work on the project shall not be performed earlier than

6:30 AM and not later than 10:00 PM.

3.4.4 Construction Sequencing

Construction scheduling and sequencing is the responsibility of the Contractor. The Contractor shall incorporate the following sequencing restrictions into the schedule:

a. The level of flood protection at the close of the 2001 construction season shall be equal to or greater than what exists in the Notice-to-Proceed for the project.

b. Existing storm sewer outfalls to the Red River shall be maintained in service until new discharge chambers and outfalls are completed and ready for service.

c. No work shall commence on First Avenue North until all work on Demers Avenue has been completed.

3.5 CONSTRUCTION RESTRICTIONS

3.5.1 Blasting

Blasting will not be permitted.

3.5.2 Protection of Trees

Trees to be protected shall be determined and staked by the Contracting Officer. The following measures shall be implemented for tree protection and shall be addressed in the Environmental Protection Plan required under Section 01410:

a. The trees shall be protected from wounds to the bark and foliage.

b. The critical root zone shall be protected from compaction and grading.

c. Changes in temporary site drainage and ponding shall be minimized to the extent possible that it effects the protected trees.

The critical root zone of trees designated to be protected shall be surrounded by a high visibility fence 4 feet in height, supplied and erected by the Contractor. The critical root zone shall be defined by an area extending 1.5 feet radius from each tree for each inch of Diameter at Breast Height (DBH). The fence shall be securely erected and installed prior to any movement through the project site by construction vehicles or equipment, and remain in place until construction and clean-up are completed. The critical root zone shall remain free of all construction activities including trenching, staging, stockpiling and storage of materials. Vehicles and equipment shall not drive or park within the critical root zone. Variation to the critical root zone size or configuration will only be permitted where it is absolutely necessary for construction of the project, and requires approval of the Contracting Officer. Short duration alterations of the critical root zone involving wood chips and limited equipment travel shall be submitted in writing for approval.

The Contractor shall not operate equipment in vegetated areas outside the work limits.

3.5.2.1 Restoration of Damaged Trees

Any existing tree designated to be protected that is damaged by the Contractor's operations shall be replaced. Trees will be considered damaged if the critical root zone in cohesive soils is compacted, if there are significant wounds that could contribute to rot, or if distress (evident by reduced growth or other observations of distress documented by a forester) is observed prior to closing the contract. Trees shall be replaced in kind on a caliper inch per caliper inch basis (DBH) (i.e. one 6-inch red oak shall be replaced with two 3-inch red oaks, three 2-inch red oaks, or six 1-inch red oaks). Replacement trees shall be planted in accordance with Section 02930 EXTERIOR PLANTING and guaranteed with the Contractor's standard warranty. Replacement tree size and location will be determined and staked by the Contracting Officer. Repair by pruning, aeration, soil conditioning, or other recommendation from a qualified forester will be considered as substitution for replacement by the Contracting Officer.

3.5.3 Pavement Removal and Replacement

Where roads are cut, removed, or otherwise damaged in the prosecution of the work the Contractor shall replace all pavements or other surfacings so removed or damaged to their preconstruction condition, unless otherwise specified or indicated. After backfill is completed on paved streets, a temporary surface shall be laid down and the street opened to traffic in order to provide access to abutting property. Restoration of the original street surface construction shall be completed no later than 60-calendar days after starting excavation. Should weather conditions preclude the restoration of the original surface material, temporary resurfacing utilizing a bituminous mixture shall be installed with the final surface constructed no later than June 1 of the following construction season.

3.5.4 Borrow and Disposal Areas

Each borrow and disposal area is subject to the approval of the Contracting Officer. Proposed borrow areas which involve the excavation of wetlands or wooded areas will not be approved by the Contracting Officer. Disposal areas which involve the placement of materials in wetlands or floodplain areas will require a minimum of 7-calendar days for review and approval or disapproval.

3.5.5 Contaminated Materials

The Contractor shall comply with all applicable federal, state and local requirements if contaminated soils, materials, and/or groundwater is/are encountered during construction activities within the contract project work limits. If contaminated materials/areas are encountered, the Contractor shall immediately notify in writing the following regarding such: the Contracting Officer, and each appropriate federal, state, and local agency. All work associated with implementation of a contingency plan and handling and/or disposal of contaminated soils, materials, and/or groundwater shall be performed in accordance with CONTRACT CLAUSE: CHANGES.

3.5.6 Accident Prevention Plan

The Contractor's accident prevention plan, as required in CONTRACT CLAUSES: ACCIDENT PREVENTION, shall specifically address site safety and monitoring with regards to possible encounters with contaminated soils, materials,

and/or groundwater. The Contractor's accident prevention plan shall also include a contingency plan to be implemented immediately upon encountering contaminated soils, materials, and/or groundwater.

3.5.7 Work In Vicinity of River Banks

To the greatest extent possible, Contractor shall not stockpile material or use heavy equipment within 100 feet of the existing river banks.

3.6 OTHER CONTRACTS

The Contractor shall coordinate with other contractors in the performance of the work and schedule such work to provide for a minimum of delays and interferences. Coordination shall be through the Contracting Officer. Work listed below is currently required under separate contract or is scheduled to be awarded as a separate contract prior to completion of work under this contract. These contracts will be considered in the application of Section 00700 CONTRACT CLAUSE: OTHER CONTRACTS.

Contracts for work within the project limits will be performed by others concurrent with this project. Contracts for the Grand Forks Phase II Levees will be awarded during the life of this Contract. Work for Phase II will occur in the following reaches: Station 149+ to 179+, Station 220+ to 237+, Station 255+ to 317+, and Station 355+ to 424+. The City of Grand Forks and utility companies will be working within the project limits to remove and relocate utilities in conflict with the project as described in paragraph EXISTING UTILITIES.

3.7 SHORING

3.7.1 General

At locations where shoring is not specifically required by the contract documents to safeguard adjacent structures, the Contractor may at its own option employ shoring for protecting work areas within excavations in lieu of performing excavation to safe and stable side slopes. The Contractor shall construct all shoring required in performing the excavations. Shoring shall be constructed in accordance with the safety requirements of EM 385-1-1.

3.7.2 Responsibility

The Contractor shall be responsible for design and maintenance of all shoring which the Contractor proposes to install. Plans and design computations for all shoring used shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES at least 30 days prior to installation.

3.7.3 Removal

Unless otherwise authorized, all sheeting and bracing shall be removed when backfill is completed.

3.8 DEWATERING OPERATIONS

3.8.1 Scope

The Contractor shall design, furnish, install and operate dewatering systems in the execution of the Contract work. The work involves drawdown of water table, shoring, and other related work. Surface drainage shall be

controlled by rerouting storm water runoff or diverting natural drainage, as necessary.

3.8.2 Payment

No separate payment will be made for dewatering on this project and compensation for all dewatering operations will be included in the respective contract items to which the work pertains.

3.8.3 Requirements

Control of groundwater shall be accomplished in a manner that will provide suitable working conditions for construction, preserve the strength of the foundation soils, will not cause instability of excavations, and will not result in damage to existing structures. Suitable working conditions for construction will provide a dry or moist subgrade free of standing, percolating, or running water during placement and curing of concrete, and placement and compaction of backfill. Where necessary to these purposes, the water level shall be lowered in advance of excavation utilizing wells, wellpoints, or similar methods. For structure foundations, the water level (as measured in piezometers) shall be maintained a minimum of 2 feet below the prevailing excavation level.

3.8.3.1 Design

The responsibility for the design of adequate dewatering protection, including shoring, pumping, and other dewatering facilities, shall rest with the Contractor. The deisgn of the protection shall be in accordance with sound engineering practice, based on generally accepted methods and assumptions as approved. If conditions warrant, and if not otherwise specified in the contract documents, dewatering may consist of collection in sumps or trenches, and open pumping. Sumps, trenches and running water shall not jeopardize erosion or ground loss near foundations, pipes, or other structures. Open pumping will not be permitted if it results in boils, seepage in concrete placement areas, loss of fines, softening of the ground, instability of slopes, or interference with orderly progress of the construction.

3.8.3.2 Regulations

Compliance with all regulations shall be incidental to the dewatering work. Disposal of water shall be in accordance with Section 01410 ENVIRONMENTAL PROTECTION and all applicable regulations. Well abandonment shall seal aquifers and confining layers in compliance with environmental regulations and permits.

3.8.3.3 Operation

Upon installation and commencement of dewatering operations, the system shall be operated continuously (24 hours/day, 7 days/week) until the structure and backfill are completed to the groundwater elevation. The Contractor shall be responsible for maintaining the system.

3.8.3.4 Removal

Upon completion of the work, well casing and screens shall be withdrawn, and all equipment shall be removed (including related temporary cofferdams, shoring, etc.)

3.8.4 Geologic Information and Hydrologic Information

Ground water elevations shown on the boring logs are those encountered at the time the borings were taken. Because groundwater elevations are dependent upon hydrologic conditions, variations in the water table should be expected. For work near the Red River of the North, refer to the hydrographs included with the contract drawings. It shall be the Contractors responsibility to perform the necessary dewatering operations irrespective of the water elevations at the time of the work. However, nothing in this clause prohibits the Contractor from receiving a time extension under the Default clause, the Time Extensions for Unusually Severe Weather clause, or any other clause in this contract.

3.8.5 Specific Requirements for Wells

3.8.5.1 Screens

Wells and wellpoints shall be installed with suitable screens and filters so that continuous pumping of fines does not occur. Pumps shall discharge into a settling tank to check for movement of sand. Wells shall be sealed in accordance with State Health Department requirements.

3.8.5.2 Setback

The following criteria shall be followed to the maximum extent possible. Where permanent site features restrict placement of dewatering devices, the Contracting Officer will allow a variance. Wellpoints shall be located a minimum horizontal distance away from structures (existing and proposed) equal to the depth of penetration below foundation elevation. Wells larger than 3 inches diameter shall be located a minimum horizontal distance away from structures equal to the depth of penetration below foundation elevation plus half the depth of penetration above foundation elevation.

3.8.5.3 Roads and Levees

Wells larger than 3 inches diameter shall not be jetted through roadway and levee embankments. Wells larger than 3 inches diameter located on the up gradient side of levees, dikes, dams or floodwalls shall be screened without a gravel filter pack. These wells shall be abandoned by plugging the hole with a cement-bentonite grout. The screens shall include a loose end cap to allow removal of screen and casing without hole collapse.

3.8.6 Dewatering Plan

At least 30 calendar days prior to commencing work on the installation or construction of dewatering protection, the Contractor shall submit for review by the Contracting Officer prints in triplicate showing plans and details of the type of construction, including shoring proposed for installation at each location. The design shall be in accordance with sound engineering practice as approved. This submittal data shall include computations covering the analysis and design layout, proposed methods of protection of construction work that would be subject to exposure to channel flows exceeding the dewatering protection capacity, type and spacing of dewatering devices, number and size of pumps and other equipment, together with a description of the installation and operating procedures, including relationship to the construction operations. The plan shall be reviewed and signed by a Registered Professional Engineer. The plan shall include the following items

a. layout (including the relationship to site improvements and construction operations)

b. type, sizes, depth and spacing of dewatering device

c. number and capacity of pumps

d. design assumptions, analysis methods, and calculations

1) justification for pump capacity

2) justification for slot size on screens

3) justification for screen intake area

4) justification for filter pack gradation

e. description of installation equipment

f. description of operating procedures

g. description of discharge point (weirs, sedimentation basin, etc.)

h. type and location of monitoring equipment

i. removal and abandonment plans

3.8.7 Liability

Government review of the proposed dewatering system will not relieve the Contractor of full responsibility for the adequacy of the dewatering operations. The Contractor shall be responsible for dewatering effects on adjacent properties, including but not limited to blockage of easements, erosion or sedimentation of ditches, and encroachment onto private property by flooding from pump outlets and sedimentation basins.

3.8.8 Related Work

Shoring, trench support systems, cofferdams and diversion structures shall be coordinated with the dewatering effort to provide safe and reliable conditions.

3.8.9 Surface Water Management During Construction

Red River Flooding: Red River of the North is prone to experience extremely high flood stages of relatively long duration. The Contractor shall be responsible for monitoring local weather conditions and flow conditions in order to anticipate flooding conditions prior to their occurrence. The Contractor shall keep the Contracting Officer informed regarding all flooding conditions on the Red River of the North.

The Contractor should satisfy itself before submitting its bid as to hazards that arise from weather conditions and flooding. Precipitation data and Red River of the North rating curves and hydrographs are included in the contract drawings and as attachments in Section 00830 ATTACHMENTS. These references include:

a. Grand Forks Airport Precipitation (Attachment 4)

b. Red River of the North Elevation-Discharge Rating Curve (Contract Drawings)

c. Mean Daily Flows for Red River of the North, Water Years 1978 and 1979 and 1991 through 1998 (Contract Drawings)

d. Red River of the North Monthly Flow Duration Curves (Contract Drawings)

3.9 SEWAGE WATER DISPOSAL

The Contractor's methods for disposal of sanitary sewage shall meet applicable local, state, and federal requirements.

3.10 SURVEYS

3.10.1 Field Layout

The Contractor shall layout the work from the Government established bench marks in accordance with Section 00800 CONTRACT CLAUSE: LAYOUT OF WORK. The construction of each feature of work shall follow the alignments as indicated on the drawings. The Contractor shall have in place, at least 7 calendar days prior to commencing construction operations, sufficient stakes and markings to enable the Contracting Officer to observe the field layout of the alignment and limits of each feature of work. For each feature of work, these stakes shall define areal limits such that the Contracting Officer can easily determine, without additional surveys, if alignment and/or limit adjustments need to be made. For embankments, levees, floodwalls, and similar work, these stakes shall define centerline, stationing, outermost fill/cut limits, and work limits. For buildings and similar work, the building corners and grid lines shall be staked. General site work shall be staked to define staging areas, storage areas, and other area limits as directed. The Contracting Officer may waive these requirements for certain areas. The layout shall be sufficient for the Contracting Officer to mark trees, vegetation and other features to be left undisturbed. No work shall take place without approval of field layout by the Contracting Officer.

3.10.1.1 Alignment Changes

The Government reserves the right to make changes in the alignment of any feature of work as may be found necessary during the course of the contract. If it becomes necessary, through no fault of the Contractor, to abandon alignment, location or feature on which work has been done, an equitable adjustment for completed work will be made. No alignment changes or abandonment shall take place without prior written notice from the Contracting Officer.

3.10.2 Utility As-builts

An as-built field survey of all utilities shall be conducted after installation to determine the final locations and elevations of all utility structures such as manholes, catch basins, gate valves, cleanouts, service connections, and other special controls or structures. Final elevations shall be determined for all sewer inverts and castings. Locations shall be shown using the same convention as the original contract drawings (typically project coordinates).

3.11 PRECONSTRUCTION DAMAGE SURVEY

Prior to the start of contract construction operations in an area, the Contractor shall conduct preconstruction property damage surveys. These surveys shall be performed initially and repeated later as required.

3.11.1 Contacting

The Contractor shall have both letter and personal contact with residents, institutional operators, and/or business establishments that are within the project work limits or near enough for ground and noise vibrations to be considered objectionable. This contact shall be made prior to beginning potential vibration-producing activities. The Contractor shall submit a list of those individuals and companies contacted prior to vibration-producing activities.

3.11.2 Preconstruction Structure Surveys

Preconstruction surveys shall be performed by qualified specialists, as approved, and retained by the Contractor for observing the condition of existing structures in the vicinity of the work at required intervals. Each survey shall include all existing structures located entirely or partially within 100 feet of the proposed work limits. Each structure shall be completely surveyed even if only part of the structure is located within the survey limits. The preconstruction survey shall produce a report including diagrams as necessary of accessing all existing foundations, floors, walls, partitions, and roofs as determined by the Contracting Officer. The report shall show and describe existing interior and exterior cracks, including elevations and photographs and video tapes of cracks/damage, and such other data as applicable to locate and define the amount and extent of existing damage. All existing structure deficiencies, major or minor, shall be identified and recorded. Crack displacement monitoring gauges shall be installed as appropriate in structures within a radius of 100 feet of the contract work in order to help verify distress if any should develop. Crack displacement monitoring gauges shall be read by the Contractor on a weekly basis.

3.11.3 Preconstruction Condition Surveys

The Contractor shall photograph and video tape facilities within the work limits, including, but not limited to, roads, borrow areas, sidewalks, trees, shrubs, and lawns prior to working in an area in order to document the preconstruction conditions. The Contractor shall also take photographs and video tape the conditions in the same areas upon completion of the project.

3.11.4 Preconstruction Survey Reports

The Contractor shall prepare and submit to the Contracting Officer, prior to the start of contract construction work/activities at each work site, 2 bound copies of each preconstruction damage report containing surveys, photographs, and video tapes, sketches and diagrams, field notes taken, descriptions and reports, all signed and witnessed by the persons involved in the survey. Thereafter, as contract work progresses, the Contractor shall resurvey as often as necessary, as required by the Contracting Officer, in order to verify the adequacy of the Contractor's construction methods for prevention of damage and to obtain sufficient evidence for use in defense against possible claims for damage from third parties. Data obtained by the Contractor from each resurvey shall be submitted to the Contracting Officer within 5 calendar days after the Contractor has

obtained it.

3.11.5 Contractor Responsibility

Nothing contained herein shall relieve the Contractor of responsibility for claims arising from its construction operations. Failure to inspect any structure, whether or not required by the contract documents, or inadequacy of the inspections shall not relieve the Contractor of its responsibilities.

-- End of Section --

ATTACHMENT A

PHASE 1 LEVEES
UTILITY CONTACT SUMMARY

1/15/2001

UTILITY COMPANY NAME	UTILITY AFFECTED	ADDRESS	CONTACT PERSON	PHONE NUMBER
Xcel Energy (formerly NSP) Gas	Underground Gas	PO Box 13038 Grand Forks, ND 58208-3038	Doug Foy	701-795-5234
Xcel Energy (formerly NSP) Electric	Overhead Power - Transmission Lines	2302 Great Northern Drive Fargo, ND 58101	Brad Sylliaasen	701-241-8626
NoDAK Power	Underground & Overhead Power - Service Lines	PO Box 13000 Grand Forks, ND 58208	John Rodgers	701-746-4461
MnDAK Power	Overhead Power - Transmission Lines	PO Box 13200 Grand Forks, ND 58208-3200	Ray Burnstad	701-795-4000 701-795-4333 (fax)
UND - Telecommunications	UND Fiber Optic	PO Box 7141 Grand Forks, ND 58208	Larry Fisk	701-777-3708
US West - Communications	Fiber Optic, Toll Cable, Underground Telephone	PO Box 13160 Grand Forks, ND 58208-3160	Judy Gerszewski	701-775-1281
Grand Forks County Road Authority	County and Township Roads	PO Box 5682 Grand Forks, ND 58206	Richard Onstad	701-780-8248
Grand Forks County Water Resources	Public Drainage Systems	Box 478 Larimore, ND 58251	Ray Trosen	701-343-2547
City of Grand Forks Engineering	Sanitary Sewer Forcemain and Watermain	PO Box 5200 Grand Forks, ND 58206	Mark Walker	701-746-2648 701-746-2514 (fax)
Brenna Township	Brenna Township Roads and Bridges	Grand Forks, ND	Keith Berg	701-772-7789
Rye Township	Rye Township Roads and Bridges	1751 21st Avenue NE Grand Forks, ND 58203	Terrance J. Stromsodt	701-746-7212
North Dakota Department of Transportation	State Highways	Grand Forks District Office PO Box 13077 Grand Forks, ND 58208-3077	Nick Ludowese, Asst. District Engineer	701-787-6500

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01090

SOURCES FOR REFERENCE PUBLICATIONS

SECTION 01090

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the sponsoring organization, e.g. ASTM B 564 Nickel Alloy Forgings. However, when the sponsoring organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the organizations whose publications are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the sponsoring organization should be ordered from the source by title rather than by number.

ACI INTERNATIONAL (ACI)

P.O. Box 9094
Farmington Hills, MI 48333-9094
Ph: 248-848-3700
Fax: 248-848-3701
Internet: http://www.aci-int.org
AOK 6/00
LOK 6/00

AGRICULTURAL MARKETING SERVICE (AMS)

Seed Regulatory and Testing Branch
USDA, AMS, LS Div.
Room 209, Bldg. 306, BARC-East
Beltsville, MD 20705-2325
Ph: 301-504-9430
Fax: 301-504-8098
Internet: http://www.ams.usda.gov/lsg
e-mail: james_p_triplitt@usda.gov
AOK 6/00
LOK 6/00

AIR MOVEMENT AND CONTROL ASSOCIATION (AMCA)

30 W. University Dr.
Arlington Heights, IL 60004-1893
Ph: 847-394-0150
Fax: 847-253-0088

Internet: www.amca.org
AOK 6/00
LOK 6/00

ALUMINUM ASSOCIATION (AA)

900 19th Street N.W.
Washington, DC 20006
Ph: 202-862-5100
Fax: 202-862-5164
Internet: www.aluminum.org
AOK 6/00
LOK 6/00

AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA)

1827 Walden Ofc. Sq.
Suite 104
Schaumburg, IL 60173-4268
Ph: 847-303-5664
Fax: 847-303-5774
Internet: www.aamanet.org
AOK 6/00
LOK 6/00

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

444 N. Capital St., NW, Suite 249
Washington, DC 20001
Ph: 800-231-3475 202-624-5800
Fax: 800-525-5562 202-624-5806
Internet: www.aashto.org
AOK 6/00
LOK 6/00

AMERICAN BEARING MANUFACTURERS ASSOCIATION (AFBMA)

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01270

MEASUREMENT AND PAYMENT

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SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 LUMP SUM PAYMENT ITEMS

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

1.1.1 Bonds

1.1.1.1 Payment

Payment will be made for costs associated with securing all bonds by this Contract.

1.1.1.2 Unit of Measure

Unit of measure: lump sum.

1.1.2 Preconstruction Damage Survey

1.1.2.1 Payment

Payment will be made for costs associated with operations necessary for conducting preconstruction damage surveys. Work shall include, but not be limited to contracting property owners, photography, video photography, surveys, instrumentation, and preparation of reports.

1.1.2.2 Unit of Measure

Unit of measure: lump sum.

1.1.3 Pump Station Site Work

1.1.3.1 Payment

Payment will be made for costs associated with operations necessary for completion of site work associated with the pump stations. Work includes, but is not limited to excavation, grading, compaction of pavement subgrades, placement of pavement layers, construction of curbs and gutters and application of pavement markings. Work also includes construction of sidewalks and exterior cast-in-place concrete stairs associated with the pump stations and discharge structures. All incidentals shall be included.

1.1.3.2 Unit of Measure

Unit of measure: lump sum.

1.1.4 Pump Station Structure

1.1.4.1 Payment

Payment will be made for costs associated with operations necessary for the construction of pump station, discharge chamber and discharge chamber access (Pump stations C3, D2 and E2) structures. Work includes, but is not limited to, excavation, temporary shoring, dewatering, traffic control, backfill, sheet pile, reinforced concrete foundations, walls, and slabs, masonry block walls, structural steel, roof systems, doors, windows, fences and architectural interior and exterior treatments. Also included are miscellaneous metal appurtenances including but not limited to stairs, ladders, hatches, checkered plates, gratings and railings. Restoration of roads, curbs and sidewalks removed or damaged during construction is incidental to the price bid. All incidentals shall be included.

1.1.4.2 Unit of Measure

Unit of measure: lump sum.

1.1.5 Pump Station Electrical

1.1.5.1 Payment

Payment will be made for costs associated with furnishing materials, equipment and labor and performing all operations necessary for the electrical features of the discharge structure and pump station.

Electrical features include but are not limited to raceways, conductors, enclosures, grounding, power distribution, lighting, receptacles, controls, instrumentation, telemetry, and switches. This shall also include the installation, mounting, connection, and testing of Government furnished equipment. All incidentals shall be included.

1.1.5.2 Unit of Measure

Unit of measure: lump sum.

1.1.6 Pump Station Mechanical

1.1.6.1 Payment

Payment will be made for costs associated with furnishing materials, equipment and labor and performing all operations necessary for the mechanical features of the discharge structure and pump station.

Mechanical features include but are not limited to stop log guides, closure gates, motorized operators, discharge piping, wall sleeves and link seals, flap valves, trash rack, pipe supports, exhaust fans, ductwork, louvers, control dampers, actuators, unit heaters, thermostats, engine generator exhaust piping, exhaust pipe insulation, duct insulation, duct supports, monorail crane and installation and testing of Government-furnished equipment. All incidentals shall be included.

The following equipment shall also be included in the lump sum price: One portable air blower, two portable electric gate operators, two 60 inch stop logs, and four trash rack rakes.

1.1.6.2 Unit of Measure

Unit of measure: lump sum.

1.1.7 Electrical Service

1.1.7.1 Payment

Payment will be made for costs associated with operations necessary for providing electrical service by the utility (Excel Energy) to the project. Work includes, but is not limited to contacting, scheduling, coordinating, providing access and reimbursing the utility (Excel Energy) for their cost associated with providing electrical service to the 4 pump stations, LIncoln Park, and Community Green.

1.1.7.2 Unit of Measure

Unit of measure: lump sum.

1.1.8 Pump Station Sluice Gates

1.1.8.1 Payment

Payment will be made for costs associated with furnishing materials, equipment, and labor and performing all operations necessary for the installation and operation of the sluice gates for the pump stations and discharge chambers. This includes, but is not limited to, the sluice gates, seals, and gate operators.

1.1.8.2 Unit of Measure

Unit of measure: lump sum.

1.1.9 Interior Drainage

1.1.9.1 Payment

Payment will be made for costs associated with operations necessary for the construction of interior drainage systems. Work includes, but is not limited to, installation of pipes, manholes, precast and cast-in-place junction boxes and drop inlet structures, catch basins, grates, castings and outfall structures. The work shall also include all discharge channel work at Pump Station D2 to include channel and stilling basin excavation and installation of riprap and articulating cellular concrete block systems. The work shall also include required pavement removals, excavation, temporary shoring, dewatering, traffic control, connections to new and existing structures and backfilling of excavations. Restoration of roads, driveways, parking areas, sidewalks and turfed areas is incidental to the price bid. All incidentals shall be included.

1.1.9.2 Unit of Measure

Unit of measure: lump sum.

1.1.10 Detention Pond D1 Site Work

1.1.10.1 Payment

Payment will be made for costs associated with operations necessary for completion of site work associated with Detention Pond D1. Work includes clearing, grubbing, stripping, excavation, grading, berm construction, access road subgrade preparation, and aggregate surface access road for the discharge channel, stilling basin and pond.

1.1.10.2 Unit of Measure

Unit of measure: lump sum.

1.1.11 Detention Pond D1 Drainage Structure

1.1.11.1 Payment

Payment will be made for costs associated with operations necessary for the construction of the drainage structure between the detention pond and stilling basin. Work includes, but is not limited to installation of the pond inlet structure and shall include excavation, backfilling of required excavations, and all incidentals for the construction of this structure.

1.1.11.2 Unit of Measure

Unit of measure: lump sum.

1.1.12 Detention Pond D1 Riprap and Concrete Block System

1.1.12.1 Payment

Payment will be made for costs associated with operations necessary for installing riprap and articulating concrete blocks system in the stilling basin and discharge channels as shown on the drawings. This work includes subgrade preparation, installation of geotextile fabric, bedding stone, riprap, articulating concrete blocks, and other incidental operations.

1.1.12.2 Unit of Measure

Unit of measure: lump sum.

1.1.13 Detention Pond D1 Landscaping

1.1.13.1 Payment

Payment will be made for costs associated with operations necessary for completion of landscaping work associated with Detention Pond D1. Work includes placing topsoil, furnishing and installing erosion control blanket, furnishing, installing, mulching, watering and maintaining required seed and plants specified and as shown on the drawings.

1.1.13.2 Unit of Measure

Unit of measure: lump sum.

1.1.14 Restroom/Warming House Site Work

1.1.14.1 Payment

Payment will be made for costs associated with operations necessary for completion of site work associated with the restroom/warming house. Work includes, but is not limited to excavation, grading, and compaction of sidewalk subgrades. All incidentals shall be included.

1.1.14.2 Unit of Measure

Unit of measure: lump sum.

1.1.15 Restroom/Warming House Structure

1.1.15.1 Payment

Payment will be made for costs associated with operations necessary for the construction of the restroom/warming house structure. Work includes, but is not limited to excavation, backfill, reinforced concrete foundations and slabs, masonry block walls, structural steel, roof systems, doors, windows, skylights, architectural interior and exterior treatments, and all furnishings. All incidentals shall be included.

1.1.15.2 Unit of Measure

Unit of measure: lump sum.

1.1.16 Restroom/Warming House Electrical

1.1.16.1 Payment

Payment will be made for costs associated with furnishing materials, equipment and labor and performing all operations necessary for the electrical features of the restroom/warming house structure.

Electrical features include but are not limited to raceways, conductors, enclosures, grounding, power distribution, lighting, receptacles, occupancy sensor, hand dryers and switches. All incidentals shall be included.

1.1.16.2 Unit of Measure

Unit of measure: lump sum.

1.1.17 Restroom/Warming House Mechanical

1.1.17.1 Payment

Payment will be made for costs associated with furnishing materials, equipment and labor and performing all operations necessary for the mechanical features of the restroom/warming house structure. Mechanical features include but are not limited to piping, plumbing fixtures, water meter, sleeves and seals, floor drains, valves, exterior drinking fountains, exhaust fans, exhaust grill, ductwork, duct insulation, duct supports, unit heaters, thermostats, water heaters, water storage tank, and miscellaneous toilet room accessories. All incidentals shall be included.

1.1.17.2 Unit of Measure

Unit of measure: lump sum.

1.1.18 Restroom/Warming House Electrical Service

1.1.18.1 Payment

Payment will be made for costs associated with operations necessary for providing electrical service by the utility (Excel Energy) to the project. Work includes, but is not limited to contacting, scheduling, coordinating, providing access and reimbursing the utility (Excel Energy) for their cost associated with providing electrical service to the Restroom/Warming House in Lincoln Park.

1.1.18.2 Unit of Measure

Unit of measure: lump sum.

1.1.19 Restroom Sanitary Sewer

1.1.19.1 Payment

Payment will be made for costs associated with operations necessary for the construction of the sanitary sewer system. Work includes, but is not limited to, installation of PVC pipe, sanitary sewer manholes and gate valve and box. The work shall also include required pavement removals, excavation, connections to existing manhole and new structure and backfilling of excavations. Restoration of roads, driveways, parking areas, sidewalks and turfed areas is incidental to the price bid. All incidentals shall be included.

1.1.19.2 Unit of Measure

Unit of measure: lump sum.

1.1.20 Restroom Water Service

1.1.20.1 Payment

Payment will be made for costs associated with operations necessary for the construction of the waterline system. Work includes, but is not limited to, installation of copper water line and service stop and box and water meter manhole. The work shall also include required pavement removals, excavation, connections to existing water main and new structure and backfilling of excavations. Restoration of roads, driveways, parking areas, sidewalks and turfed areas is incidental to the price bid. All incidentals shall be included.

1.1.20.2 Unit of Measure

Unit of measure: lump sum.

1.1.21 Closure Structure

1.1.21.1 Payment

Payment will be made for costs associated with operations necessary for the construction of closure structures and transition walls. Work includes, but is not limited to, excavation, temporary shoring, dewatering, traffic control, backfill, grading, sheet pile cut-offs and transitions, reinforced concrete foundations, walls, approach slabs and columns, architectural surface treatments for walls, stop log sills, stop log guides and stop log supports. The work shall also include furnishing stop logs. Restoration of roads, curbs and sidewalks is incidental to the price bid. All

incidentals shall be included.

1.1.21.2 Unit of Measure

Unit of measure: lump sum.

1.1.22 Demolition

1.1.22.1 Payment

Payment will be made for costs associated with operations for demolition, removal and salvage of existing structures and equipment. Items to be demolished include, but is not limited to existing DeMers Avenue Pump Station, abandoned storm and sanitary sewers, abandoned water mains, abandoned gas lines, manholes, roads, curbs, parking lots, sidewalks, foundations and slabs from removed homes, and utility services to removed homes. Debris shall be taken off site for proper disposal. Items to be salvaged include, but is not limited to pumps, valves and equipment in existing DeMers Avenue Pump Station, street lights, flagpoles, signs, pedestrian street crossing lights, and miscellaneous recreation structures in DeMers City Park. Salvaged items shall be delivered to the City.

1.1.22.2 Unit of Measurement

Unit of measure: lump sum.

1.1.23 Clearing and Grubbing

1.1.23.1 Payment

Payment will be made for costs associated with clearing and grubbing operations. Clearing and grubbing includes, but is not limited to preparation of areas scheduled for construction of pump stations, interior drainage structures, levees, recreation areas and parks, closure structures and recreation trails. Material that can be salvaged shall be stored for later use. Debris shall be properly disposed. No allowances for clearing and grubbing outside the limits of construction unless authorized.

1.1.23.2 Unit of Measurement

Unit of measure: lump sum.

1.1.24 Stripping

1.1.24.1 Payment

Payment will be made for costs associated with stripping operations. Stripping includes, but is not limited to removal of vegetation and removal and stockpiling topsoil in areas scheduled for construction of pump stations, interior drainage structures, levees, recreation areas and parks, closure structures and recreation trails. Material that can be salvaged shall be stored for later use. Debris shall be properly disposed. No allowances for clearing and grubbing outside the limits of construction unless authorized.

1.1.24.2 Unit of Measurement

Unit of measure: lump sum.

1.1.25 Concrete Paving

1.1.25.1 Payment

Payment will be made for costs associated with operations necessary for construction of cast-in-place concrete walks, drives, curbs and gutters, and recreational feature pads which include performing required excavation, installing required reinforcement, and concrete. All incidentals shall be included.

1.1.25.2 Unit of Measure

Unit of measure: lump sum.

1.1.26 Bituminous Paving

1.1.26.1 Payment

Payment will be made for costs associated with operations necessary for construction of bituminous trails, which includes performing required excavation, base course, and bituminous lifts. Work includes construction of gravel shoulders for bituminous trails. All incidentals shall be included.

1.1.26.2 Unit of Measure

Unit of measure: lump sum.

1.1.27 Concrete Pavers

1.1.27.1 Payment

Payment will be made for costs associated with operations necessary for construction of concrete pavers, which includes performing required excavation, installation of reinforced concrete base, sand setting bed, pavers, and other incidental operations.

1.1.27.2 Unit of Measure

Unit of measure: lump sum.

1.1.28 Lighting/Electrical (Demers)

1.1.28.1 Payment

Payment will be made for costs associated with furnishing materials, equipment and labor and performing all operations necessary for construction of exterior lighting and electrical systems. Work includes, but is not limited to excavation, trenching, backfilling, directional boring, conductors, enclosures, concrete foundations for lighting, power distribution, light poles and fixtures, floodlights and control centers. All incidentals shall be included.

1.1.28.2 Unit of Measure

Unit of measure: lump sum.

1.1.29 Drinking Fountain

1.1.29.1 Payment

Payment will be made for costs associated with operations necessary for construction of drinking fountain, which includes performing required fabrication, painting, plumbing and mounting.

1.1.29.2 Unit of Measure

Unit of measure: lump sum.

1.1.30 Bike Rack

1.1.30.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of bike rack specified which includes performing required excavation, concrete footings, fabrication, mounting, and other incidental operations.

1.1.30.2 Unit of Measure

Unit of measure: lump sum.

1.1.31 Regulatory Signage

1.1.31.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of regulatory signage specified which includes performing required fabrication, mounting, and other incidental operations.

1.1.31.2 Unit of Measure

Unit of measure: lump sum.

1.1.32 Directional Signage

1.1.32.1 Payment

Payment will be made for costs associated with operations necessary for construction of directional signage, which includes performing required excavation, installation of wood post, signage, fabrication, painting, mounting and other incidental operations.

1.1.32.2 Unit of Measure

Unit of measure: lump sum.

1.1.33 Crosswalk Striping

1.1.33.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of crosswalk striping which includes performing required cleaning, painting, and other incidental operations.

1.1.33.2 Unit of Measure

Unit of measure: lump sum.

1.1.34 Bank Stabilization

1.1.34.1 Payment

Payment will be made for costs associated with operations necessary for installation of bank stabilization which includes performing required clearing, excavation, geotextile, planting and other incidental operations.

1.1.34.2 Unit of Measure

Unit of measure: lump sum.

1.1.35 Riprap Stabilization

1.1.35.1 Payment

Payment will be made for costs associated with operations necessary for installation of riprap stabilization which includes performing required clearing, excavation, riprap, geotextile, planting and other incidental operations.

1.1.35.2 Unit of Measure

Unit of measure: lump sum.

1.1.36 Trees, Shrubs, and Perennials

1.1.36.1 Payment

Payment for plant installation will be made for costs associated with furnishing, installing, mulching, watering, and maintaining the required plants and materials specified.

If the Government requires additional materials and work beyond that specified or shown in the Contract, the Contractor will receive compensation for the additional materials and work as Extra Work.

1.1.36.2 Unit of Measure

Unit of measure: lump sum.

1.1.37 Topsoil and Class I Seeding (Turf Grasses)

1.1.37.1 Payment

Payment will be made for costs associated with operations necessary for installation of topsoil and seeding which includes performing required clearing, excavation, topsoil, seeding and other incidental operations.

1.1.37.2 Unit of Measure

Unit of measure: lump sum.

1.1.38 Topsoil and Class II Seeding (Native Grasses)

1.1.38.1 Payment

Payment will be made for costs associated with operations necessary for

installation of topsoil and seeding which includes performing required clearing, excavation, topsoil, seeding and other incidental operations.

1.1.38.2 Unit of Measure

Unit of measure: lump sum.

1.1.39 Topsoil and Class II Seeding (with FORBS)

1.1.39.1 Payment

Payment will be made for costs associated with operations necessary for installation of topsoil and seeding which includes performing required clearing, excavation, topsoil, seeding and other incidental operations.

1.1.39.2 Unit of Measure

Unit of measure: lump sum.

1.1.40 Topsoil and Class III Seeding (Moist Condition Grasses)

1.1.40.1 Payment

Payment will be made for costs associated with operations necessary for installation of topsoil and seeding which includes performing required clearing, excavation, topsoil, seeding and other incidental operations.

1.1.40.2 Unit of Measure

Unit of measure: lump sum.

1.1.41 Stretching Bar With Resilient Pad

1.1.41.1 Payment

Payment will be made for costs associated with operations necessary for construction of stretching equipment, which includes performing required excavation, installation of reinforced concrete containment edge (where required), resilient surfacing, structures, and other incidental operations.

1.1.41.2 Unit of Measure

Unit of measure: lump sum.

1.1.42 Grading

1.1.42.1 Payment

Payment will be made for costs associated with operations necessary for grading, which includes performing required stripping, stockpiling, excavating, placing of fill, and other incidental operations.

1.1.42.2 Unit of Measure

Unit of measure: lump sum.

1.1.43 Concrete Retaining Walls

1.1.43.1 Payment

Payment will be made for costs associated with operations necessary for construction of cast-in-place concrete retaining walls, which includes performing required excavation, installing required reinforcement, concrete, and applying required architectural surface treatments. All incidentals shall be included.

1.1.43.2 Unit of Measure

Unit of measure: lump sum.

1.1.44 Concrete Terrace Walls

1.1.44.1 Payment

Payment will be made for costs associated with operations necessary for construction of cast-in-place concrete terrace walls, which includes performing required excavation, installing required reinforcement, concrete, and applying required formliner and staining. All incidentals shall be included.

1.1.44.2 Unit of Measure

Unit of measure: lump sum.

1.1.45 Exterior Lighting (Along Riverboat Road)

1.1.45.1 Payment

Payment will be made for costs associated with furnishing materials, equipment and labor and performing all operations necessary for construction of exterior lighting systems. Work includes, but is not limited to excavation, trenching, backfilling, directional boring, conductors, enclosures, concrete foundations for lighting, power distribution, light poles and fixtures, floodlights and control centers. All incidentals shall be included.

1.1.45.2 Unit of Measure

Unit of measure: lump sum.

1.1.46 Rotary Garden (Interpretive Sign and Planting Only)

1.1.46.1 Payment

Payment will be made for costs associated with operations necessary for construction of Rotary Garden, which includes performing required relocation of existing gazebo, Rotary interpretive sign, planting, and other incidental operations.

1.1.46.2 Unit of Measure

Unit of measure: lump sum.

1.1.47 Riverboat Road

1.1.47.1 Payment

Payment will be made for costs associated with operations necessary for

construction of Riverboat Road, which includes performing required base installation, reinforced concrete drive, concrete curb and gutter, and other incidental operations.

1.1.47.2 Unit of Measure

Unit of measure: lump sum.

1.1.48 Obelisk

1.1.48.1 Payment

Payment will be made for costs associated with operations necessary for construction of obelisk, which includes performing required excavation, installation of reinforced concrete footing, concrete, precast concrete cap, and applying required architectural surface treatments. All incidentals shall be included.

1.1.48.2 Unit of Measure

Unit of measure: lump sum.

1.1.49 Concrete Stairs and Cheek Wall

1.1.49.1 Payment

Payment will be made for costs associated with operations necessary for construction of cast-in-place concrete stairs, and cheek walls, which includes performing required excavation, installing required reinforcement, and concrete. All incidentals shall be included.

1.1.49.2 Unit of Measure

Unit of measure: lump sum.

1.1.50 Bollard and Chain

1.1.50.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of bollards and chains specified which includes performing required fabrication, mounting, galvanized chain, and other incidental operations.

1.1.50.2 Unit of Measure

Unit of measure: lump sum.

1.1.51 Water Service

1.1.51.1 Payment

Payment will be made for costs associated with operations necessary for the construction of the waterline system. Work includes, but is not limited to, installation of copper water line and service stop and box and water meter manhole. The work shall also include required pavement removals, excavation, connections to existing water main and new structure and backfilling of excavations. Restoration of roads, driveways, parking areas, sidewalks and turfed areas is incidental to the price bid. All

incidentals shall be included.

1.1.51.2 Unit of Measure

Unit of measure: lump sum.

1.1.52 Exterior Lighting (Lincoln Park and Olson/Elmwood)

1.1.52.1 Payment

Payment will be made for costs associated with furnishing materials, equipment and labor and performing all operations necessary for construction of exterior lighting systems. Work includes, but is not limited to excavation, trenching, backfilling, directional boring, conductors, enclosures, concrete foundations for lighting, power distribution, light poles and fixtures, floodlights and control centers. All incidentals shall be included.

1.1.52.2 Unit of Measure

Unit of measure: lump sum.

1.1.53 Playground Equipment

1.1.53.1 Payment

Payment will be made for costs associated with operations necessary for construction of Playground, which includes performing required excavation, installation of reinforced concrete containment edge (where required), subsurface drainage, pea gravel, resilient surfacing, play structures, and other incidental operations.

1.1.53.2 Unit of Measure

Unit of measure: lump sum.

1.1.54 Parking Lot

1.1.54.1 Payment

Payment will be made for costs associated with operations necessary for construction of cast-in-place concrete parking lot and access drive. Work includes, but is not limited to excavation, compaction of subgrade, placement of pavement layers, construction of curbs and gutters and application of pavement markings. Also included is construction of parking lot storm sewer system, including excavation, curb inlets, storm sewer, outlet, riprap, and street restoration. All incidentals shall be included.

1.1.54.2 Unit of Measure

Unit of measure: lump sum.

1.1.55 Interpretive Signage

1.1.55.1 Payment

Payment will be made for costs associated with operations necessary for construction of interpretive signage, which includes performing required excavation, installation of posts, signage, fabrication, painting,

mounting, and other incidental operations.

1.1.55.2 Unit of Measure

Unit of measure: lump sum.

1.1.56 Signage on Closure Columns

1.1.56.1 Payment

Payment will be made for costs associated with operations necessary for construction and installation of signage and lettering, which includes performing required fabrication, mounting, and other incidental operations.

1.1.56.2 Unit of Measure

Unit of measure: lump sum.

1.1.57 Reset Flagpole

1.1.57.1 Payment

Payment will be made for costs associated with operations necessary for removal and resetting of the flagpole at Lincoln Park, which includes performing required removal, mounting, and other incidental operations.

1.1.57.2 Unit of Measure

Unit of measure: lump sum.

1.1.58 CMU Seatwall

1.1.58.1 Payment

Payment will be made for costs associated with operations necessary for construction of the CMU Seatwall at Lincoln Park, which includes performing required excavation, reinforcing and construction, and other incidental operations.

1.1.58.2 Unit of Measure

Unit of measure: lump sum.

1.2 UNIT PRICE PAYMENT ITEMS

Payment items for the work of this contract on which the contract unit price payments will be made are listed in the BIDDING SCHEDULE and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, environmental protection, meeting safety requirements, tests and reports, and for performing all work required for each of the unit price items.

1.2.1 Levee Removal

1.2.1.1 Payment

Payment will be made for costs associated with excavation of existing

levees, which includes performing required excavation, stockpiling of topsoil and acceptable materials for levee construction, disposition of unacceptable materials, and grading, seeding, and restoration following completion of levee removal.

1.2.1.2 Measurement

Levee removal shall be measured for payment by the cubic yard, in the original position, using the average-end-area method based on original and final ground lines as determined by the required surveys.

1.2.1.3 Unit of Measure

Unit of measure: cubic yard.

1.2.2 Inspection Trench

1.2.2.1 Payment

Payment will be made for costs associated with excavation, dewatering and backfilling inspection trenches with acceptable, compacted impervious material as specified and as shown on the drawings. Stockpiling of acceptable material for later use and disposition of unacceptable materials will be incidental to the price bid for inspection trenches.

1.2.2.2 Measurement

Inspection trenches will be measured for payment by the linear foot. Inspection trenches excavated beyond the limits shown on the drawings and not authorized by the Contracting Officer will not be measured for payment.

1.2.2.3 Unit of Measure

Unit of measure: linear foot.

1.2.3 Select Impervious Fill

1.2.3.1 Payment

Payment will be made for the costs associated with the final placement and compaction of select impervious fill for the construction of the levees.

1.2.3.2 Measurement

Select impervious fill shall be measured for payment by the cubic yard and quantities will be determined by the average-end-area method. The basis for payment will be cross sections of areas to be filled taken after clearing, grubbing and stripping operations or the placement of underlying impervious fill material, where applicable, and the theoretical cross sections of the embankments constructed within the specified tolerance. Cross sections shall be performed at significant breaks in grade except that the maximum distance between cross sections shall not exceed 50 feet. Volumes occupied by floodwalls and discharge structures will not be included in measurement of select impervious fill for payment.

1.2.3.3 Unit of Measure

Unit of measure: cubic yard.

1.2.4 Impervious Fill

1.2.4.1 Payment

Payment will be made for the costs associated with the final placement and compaction of impervious fill for the construction of the levees.

1.2.4.2 Measurement

Impervious fill shall be measured for payment by the cubic yard and quantities will be determined by the average-end-area method. The basis for payment will be cross sections of areas to be filled taken after clearing, grubbing and stripping operations and the theoretical cross sections of the embankments constructed within the specified tolerance. Cross sections shall be performed at significant breaks in grade except that the maximum distance between cross sections shall not exceed 50 feet. Volumes occupied by floodwalls and discharge structures will not be included in measurement of impervious fill for payment.

1.2.4.3 Unit of Measure

Unit of measure: cubic yard.

1.2.5 Random Fill

1.2.5.1 Payment

Payment will be made for the costs associated with the final placement and compaction of random fill for the construction of the levees.

1.2.5.2 Measurement

Impervious fill shall be measured for payment by the cubic yard and quantities will be determined by the average-end-area method. The basis for payment will be cross sections of areas to be filled taken after clearing, grubbing and stripping operations and the theoretical cross sections of the embankments constructed within the specified tolerance. Cross sections shall be performed at significant breaks in grade except that the maximum distance between cross sections shall not exceed 50 feet. Volumes occupied by floodwalls and discharge structures will not be included in measurement of impervious fill for payment.

1.2.6 Phone Booth

1.2.6.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of phone booth specified which includes performing required fabrication, mounting, and other incidental operations.

1.2.6.2 Measurement

Telephone booth will be measured by the number of units of each type-constructed complete-in-place.

1.2.6.3 Unit of Measure

Unit of measure: each.

1.2.7 Type A Trash Can

1.2.7.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of trash receptacle specified which includes performing required fabrication, mounting, and other incidental operations.

1.2.7.2 Measurement

Trash receptacle will be measured by the number of units of each type-constructed complete-in-place.

1.2.7.3 Unit of Measure

Unit of measure: each.

1.2.8 Type B Trash Can

1.2.8.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of trash receptacle specified which includes performing required fabrication, mounting, and other incidental operations.

1.2.8.2 Measurement

Trash receptacle will be measured by the number of units of each type-constructed complete-in-place.

1.2.8.3 Unit of Measure

Unit of measure: each.

1.2.9 Type C Trash Can

1.2.9.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of trash receptacle specified which includes performing required fabrication, mounting, and other incidental operations.

1.2.9.2 Measurement

Trash receptacle will be measured by the number of units of each type-constructed complete-in-place.

1.2.9.3 Unit of Measure

Unit of measure: each.

1.2.10 Type D Trash Can

1.2.10.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of trash receptacle specified which includes performing required fabrication, mounting, and other incidental operations.

1.2.10.2 Measurement

Trash receptacle will be measured by the number of units of each type-constructed complete-in-place.

1.2.10.3 Unit of Measure

Unit of measure: each.

1.2.11 Flag Pole

1.2.11.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of flag pole specified which includes performing required excavation, reinforced concrete footing, performing required fabrication, mounting, and other incidental operations.

1.2.11.2 Measurement

Flag Pole will be measured by the number of units of each type constructed complete-in-place.

1.2.11.3 Unit of Measure

Unit of measure: each.

1.2.12 Type B Bollards

1.2.12.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of bollards specified which includes performing required fabrication, mounting, and other incidental operations.

1.2.12.2 Measurement

Bollards will be measured by the number of units of each type-constructed complete-in-place.

1.2.12.3 Unit of Measure

Unit of measure: each.

1.2.13 Aluminum Bollards

1.2.13.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of bollards specified which includes performing required fabrication, mounting, and other incidental operations.

1.2.13.2 Measurement

Bollards will be measured by the number of units of each type-constructed complete-in-place.

1.2.13.3 Unit of Measure

Unit of measure: each.

1.2.14 Transplanted Trees

1.2.14.1 Payment

Payment for plant installation at a percentage of the contract price per unit of measure will be compensation in full for all costs relating to transplanting, mulching, watering, and maintaining, the required plants and materials specified.

If the Government requires additional materials and work beyond that specified or shown in the Contract, the Contractor will receive compensation for the additional materials and work as Extra Work.

1.2.14.2 Measurement

Trees of each size and type furnished by the Government and transplanted will be measured separately by the number of plants moved and maintained in an acceptable manner.

1.2.14.3 Unit of Measure

Unit of measure: each.

1.2.15 Type C Bollards

1.2.15.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of Bollards specified which includes performing required fabrication, mounting, and other incidental operations.

1.2.15.2 Measurement

Bollards will be measured by the number of units of each type-constructed complete-in-place.

1.2.15.3 Unit of Measure

Unit of measure: each.

1.2.16 Type A Bench

1.2.16.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of bench specified which includes performing required fabrication, mounting, and other incidental operations.

1.2.16.2 Measurement

Benches will be measured by the number of units of each type-constructed complete-in-place.

1.2.16.3 Unit of Measure

Unit of measure: each.

1.2.17 Type B Bench

1.2.17.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of bench specified which includes performing required fabrication, mounting, and other incidental operations.

1.2.17.2 Measurement

Benches will be measured by the number of units of each type-constructed complete-in-place.

1.2.17.3 Unit of Measure

Unit of measure: each.

1.2.18 Type C Bench

1.2.18.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of bench specified which includes performing required fabrication, mounting, and other incidental operations.

1.2.18.2 Measurement

Benches will be measured by the number of units of each type-constructed complete-in-place.

1.2.18.3 Unit of Measure

Unit of measure: each.

1.2.19 Lincoln Park - Wood Kiosk

1.2.19.1 Payment

Payment will be made for costs associated with operations necessary for construction and installation of wood kiosk, which includes performing required fabrication, concrete footing, mounting, and other incidental operations.

1.2.19.2 Measurement

Kiosks will be measured by the number of units of each type-constructed complete-in-place.

1.2.19.3 Unit of Measure

Unit of measure: each.

1.2.20 DeMers Avenue Entry Kiosk

1.2.20.1 Payment

Payment will be made for costs associated with operations necessary for construction of kiosks, which includes performing required excavation, installation of reinforced concrete footing, stone veneer, cabinet

fabrication, painting, mounting and other incidental operations.

1.2.20.2 Measurement

Kiosks will be measured by the number of units of each type-constructed complete-in-place.

1.2.20.3 Unit of Measure

Unit of measure: each.

1.2.21 Decorative Railings

1.2.21.1 Payment

Payment will be made for costs associated with operations necessary for construction of railings, which includes performing required fabrication, painting, and mounting.

1.2.21.2 Measurement

Railings shall be measured for payment by the linear foot of railing isntalled.

1.2.21.3 Unit of Measure

Unit of measure: linear foot.

1.2.22 Limestone Bollard

1.2.22.1 Payment

Payment will be made for costs associated with operations necessary for fabrication and installation of Bollards specified which includes performing required fabrication, mounting, and other incidental operations.

1.2.22.2 Measurement

Bollards will be measured by the number of units of each type-constructed complete-in-place.

1.2.22.3 Unit of Measure

Unit of measure: each.

1.2.23 Picnic Shelter - Large

1.2.23.1 Payment

Payment will be made for costs associated with operations necessary for construction of picnic shelters, which includes performing required excavation, installation of reinforced concrete footings, prefabricated shelter, and other incidental operations.

1.2.23.2 Measurement

Picnic shelters will be measured by the number of units of each type-constructed complete-in-place.

1.2.23.3 Unit of Measure

Unit of measure: each.

1.2.24 Picnic Shelter - Small

1.2.24.1 Payment

Payment will be made for costs associated with operations necessary for construction of picnic shelters, which includes performing required excavation, installation of reinforced concrete footings, column veneer (on large structures only), prefabricated shelter, and other incidental operations.

1.2.24.2 Measurement

Picnic shelters will be measured by the number of units of each type-constructed complete-in-place.

1.2.24.3 Unit of Measure

Unit of measure: each.

1.2.25 Picnic Table Type A

1.2.25.1 Payment

Payment will be made for costs associated with operations necessary for construction of picnic tables, which includes performing required fabrication, mounting, and other incidental operations.

1.2.25.2 Measurement

Picnic tables will be measured by the number of units of each type-constructed complete-in-place.

1.2.25.3 Unit of Measure

Unit of measure: each.

1.2.26 Picnic Table Type B

1.2.26.1 Payment

Payment will be made for costs associated with operations necessary for construction of picnic tables, which includes performing required fabrication, mounting, and other incidental operations.

1.2.26.2 Measurement

Picnic tables will be measured by the number of units of each type-constructed complete-in-place.

1.2.26.3 Unit of Measure

Unit of measure: each.

1.2.27 Picnic Table Type C

1.2.27.1 Payment

Payment will be made for costs associated with operations necessary for construction of picnic tables, which includes performing required fabrication, mounting, and other incidental operations.

1.2.27.2 Measurement

Picnic tables will be measured by the number of units of each type-constructed complete-in-place.

1.2.27.3 Unit of Measure

Unit of measure: each.

1.2.28 Picnic Table Type D

1.2.28.1 Payment

Payment will be made for costs associated with operations necessary for construction of picnic tables, which includes performing required fabrication, mounting, and other incidental operations.

1.2.28.2 Measurement

Picnic tables will be measured by the number of units of each type-constructed complete-in-place.

1.2.28.3 Unit of Measure

Unit of measure: each.

1.2.29 Large Grill Type B

1.2.29.1 Payment

Payment will be made for costs associated with operations necessary for construction and installation of grills, which includes performing required fabrication, mounting, and other incidental operations.

1.2.29.2 Measurement

Grills will be measured by the number of units of each type-constructed complete-in-place.

1.2.29.3 Unit of Measure

Unit of measure: each.

1.2.30 Small Grill Type A

1.2.30.1 Payment

Payment will be made for costs associated with operations necessary for construction and installation of grills, which includes performing required fabrication, mounting, and other incidental operations.

1.2.30.2 Measurement

Grills will be measured by the number of units of each type-constructed complete-in-place.

1.2.30.3 Unit of Measure

Unit of measure: each.

1.2.31 Trees, Shrubs, and Perennials

1.2.31.1 Payment

Payment for plant installation will be compensation in full for all costs relating to furnishing, installing, mulching, watering, and maintaining, or transplanting and maintaining, the required plants and materials specified.

1.2.31.2 Measurement

a. Plants Transplanted: Trees of each size and type furnished by the Government and transplanted will be measured separately by the number of plants moved and maintained in an acceptable manner.

b. Plants Furnished and Planted: Trees, shrubs, vines and perennials of each species, variety, size, or age, and root category furnished, planted, and maintained by the Contractor will be measured separately by the number of acceptable plants.

1.2.31.3 Unit of Measure

Unit of measure: each.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01320

PROJECT SCHEDULE

-- End of Section Table of Contents --

SECTION 01320

PROJECT SCHEDULE

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-07 Schedules

Initial Project Schedule; GA. Periodic Updates; GA.

Five copies of the initial project schedule shall be submitted. Two copies of periodic project schedule updates shall be submitted.

SD-14 Samples

Software; FIO.

The Contractor shall furnish the Government copies of the scheduling software if required under paragraph COMPUTER SOFTWARE REQUIREMENTS.

1.2 QUALIFICATIONS

The Contractor shall designate an authorized representative who shall be responsible for the preparation of all required project schedule reports.

PART 2 PRODUCTS

2.1 COMPUTER SOFTWARE REQUIREMENTS

The Contractor shall furnish the Government with the software to be used, unless waived by the Contracting Officer. The Contactor shall assist in installing the software in the Government resident office. The Contractor shall provide the software complete, including documentation and updates used in the Contractor's system. The software shall remain the property of the Contractor, but shall be in the possession of and for the exclusive use by the Government during the contract period. The Government shall have rights to install the software on 3 computers (resident office, area office, and district office).

PART 3 EXECUTION

3.1 GENERAL

Pursuant to the Contract Clause, SCHEDULES FOR CONSTRUCTION CONTRACTS, a project schedule as described below shall be prepared. The scheduling of work shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers working on the project shall contribute in developing and

maintaining an accurate project schedule. The approved project schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of progress payments.

3.2 BASIS FOR PAYMENT

The project schedule shall be the basis for measuring Contractor progress. The Contracting Officer will use an approved project schedule to evaluate Contractor progress for payment purposes. In the case where project schedule revisions have been directed by the Contracting Officer and those revisions have not been included in the project schedule, then the Contracting Officer may hold retainage up to the maximum allowed by contract, each payment period, until the project schedule updates have been accepted.

3.3 SOFTWARE

Computer software systems utilized by the Contractor to produce the project schedule shall be capable of providing all requirements of this specification.

3.3.1 Use of the Critical Path Method

The project schedule shall clearly show the critical path. If a network analysis system is used, the Critical Path Method (CPM) of network calculation shall be used to generate the project schedule, provided in either the Precedence Diagram Method (PDM) or the Arrow Diagram Method (ADM).

3.3.2 Level of Detail Required

The project schedule shall include an appropriate level of detail. The Contracting Officer will use, but is not limited to, the following conditions to determine the appropriate level of detail to be used in the project schedule.

3.3.2.1 Activity Durations

The Contractor shall breakout lump-sum or sum-job contract line items into subcategories, or activities. The number of activities shall be sufficient to allow the progress to be accurately determined between payment periods.

3.3.2.2 Procurement Activities

Tasks related to the procurement of long lead materials or equipment shall be included as separate activities in the project schedule. Long lead materials and equipment are those materials that have a procurement cycle of over calender 90 days. Examples of procurement process activities include, but are not limited to: submittals, approvals, procurement, fabrication, delivery, installation, start-up, and testing.

3.3.2.3 Government Activities

Government and other agency activities that could impact progress shall be shown. These activities include, but are not limited to: approvals, inspections, utility tie-in, Government furnished property, and notice to proceed for phasing requirements.

3.3.2.4 Responsibility

All activities shall be identified in the project schedule by the party (Prime Contractor, subcontractor, Government agency, etc.) responsible to perform the work. Activities shall not belong to more than one responsible party. The responsible party for each activity shall be identified by the Responsibility Code.

3.3.2.5 Feature of Work

All activities shall be identified in the project schedule according to the feature of work to which the activity belongs. Feature of work refers, but is not limited to a work breakdown structure for the project schedule. The feature of work for each activity shall be identified by the Feature of Work Code.

3.3.3 Scheduled Project Completion

The schedule interval shall extend from notice to proceed to the contract completion date. The notice to proceed date shall be taken as the date that notice to proceed was acknowledged.

3.3.3.1 Constraint of Last Activity

Completion of the last activity in the project schedule shall be constrained by the contract completion date. If the early finish of the last activity falls after the contract completion date, then the critical path shall show a negative float.

3.3.3.2 Early Project Completion

If the project schedule shows project completion prior to the contract completion date, the Contractor shall identify activities that have been accelerated and activities that are scheduled in parallel to support the "early" completion. The Contractor shall assist the Contracting Officer in evaluating the Contractor's ability to actually complete prior to the contract period.

3.3.4 Interim Completion Dates

Contractually specified interim completion dates shall also be constrained to show negative float if the early finish date of the last activity in that phase falls after the interim completion date.

3.3.5 Default Progress Data Disallowed

The Contractor shall document the actual start and actual finish dates on the daily quality control report for every in-progress or completed activity and ensure that the data contained on the daily quality control reports is the sole basis for project schedule updating. Actual Start and Finish dates shall not be automatically updated by default mechanisms that may be included in CPM scheduling software systems. Actual start and finish dates on the CPM schedule shall match those dates provided from Contractor quality control reports.

3.3.6 Out-of-Sequence Progress

The Contracting Officer shall be notified prior to work on any activities that are out-of-sequence with the project schedule. The Contractor shall update the project schedule to correct any out-of-sequence work.

3.3.7 Extended Non-Work Periods

Non-work periods of over 5 working days shall be identified by addition of activities that represent the delays.

3.3.8 Negative Lags

Lag durations contained in the project schedule shall not have a negative value.

3.4 PROJECT SCHEDULE SUBMISSIONS

The Contractor shall provide the submissions as described below.

3.4.1 Initial Project Schedule Submission

The project schedule shall provide a reasonable sequence of activities which represent work through the entire contract period and shall be at a reasonable level of detail.

3.4.2 Periodic Updates

Based on the result of progress meetings, the Contractor shall submit periodic project schedule updates. The Contractor shall furnish information and project schedule data, which in the judgement of the Contracting Officer, is necessary for verifying the Contractor's progress.

3.4.3 Standard Activity Coding Dictionary

The Contractor shall submit, with the initial project schedule, a coding scheme that shall be used throughout the project schedule for all activity codes contained in the project schedule. The coding scheme submitted shall list the values for each activity code category and translate those values into project specific designations. For example, a responsibility code value, "ELE", may be identified as "Electrical Subcontractor". Activity code values shall represent the same information throughout the duration of the contract.

3.5 SUBMISSION REQUIREMENTS

The following items shall be submitted for each project schedule submission:

3.5.1 Earnings Report

The Contractor shall submit a compilation of the Contractor's Total Earnings on the project through the most recent Monthly Progress Meeting. Activities shall be grouped by contract line item. The printed report shall contain, for each contract line item: activity number, activity description, original budgeted amount, total quantity, quantity to date, percent complete (based on cost), and earnings to date. A total project percent complete shall also be provided. If necessary to substantiate partial payment and requested by the Contracting Officer, the earnings report shall detail activities within a contract line item.

3.5.2 Network Diagram

A network diagram shall be required on the initial project schedule submission and on periodic submissions when requested by the Contracting

Officer (not less than quarterly). The network diagram shall depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished. The network diagram shall be constructed to meet the following conditions:

a. Continuous Flow. Diagrams shall show a continuous flow from left to right with no arrows from right to left. The activity or event number, description, duration, and estimated earned value shall be shown on the diagram.

b. Project Milestone Dates. Dates shall be shown on the diagram for start of project, any contract required interim completion dates, and contract completion dates.

c. Critical Path. The critical path shall be clearly shown.

d. Banding. Activities shall be grouped to assist in the understanding of the activity sequence. Typically, this flow will group activities by category of work, work area and/or responsibility.

e. S-Curves. Earnings curves showing projected early and late earnings and earnings to date.

3.6 PERIODIC PROGRESS MEETINGS

Progress meetings to discuss payment shall include a monthly onsite meeting or other regular intervals mutually agreed to at the preconstruction conference. During this meeting the Contractor shall describe, on an activity by activity basis, all proposed revisions and adjustments to the project schedule required to reflect the current status of the project.

3.6.1 Meeting Attendance

The Contractor's project manager and the Contractor's authorized representative responsible for preparation of the project schedule shall attend the regular progress meeting.

3.6.2 Update Submission Following Progress Meeting

A complete update of the project schedule containing all approved progress, revisions, and adjustments, based on the regular progress meeting, shall be submitted not later than 4 working days after every third monthly progress meeting.

3.6.3 Progress Meeting Contents

Update information, including actual start dates, actual finish dates, remaining durations, and cost-to-date shall be subject to the approval of the Contracting Officer. The Contractor shall address the following minimum set of items, on an activity by activity basis, during each progress meeting.

a. Start and Finish Dates. The actual start and actual finish dates for each completed activity. The actual start and projected finish dates for each activity in-progress.

b. Cost Completion. The earnings for each activity started. Payment will be based on earnings for each in-progress or completed activity. Payment for individual activities will not be made for work that

contains defects.

c. Project Schedule Changes. All changes pertaining to notice to proceed on change orders, change orders to be incorporated into the project schedule, Contractor proposed changes in work sequence, corrections to project schedule for out-of-sequence progress, lag durations, and other changes that have been made pursuant to contract provisions shall be specifically identified and discussed.

d. Other Changes. Other changes required due to delays in completion of any activity or group of activities include unusually severe weather, product procurement, or other delays or work stoppages which make re-planning the work necessary.

3.7 REQUESTS FOR TIME EXTENSIONS

In the event the Contractor requests an extension of the contract completion date, the Contractor shall furnish such justification, project schedule data and supporting evidence as the Contracting Officer may deem necessary for a determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract.

3.7.1 Justification of Delay

The project schedule shall clearly display that the Contractor has used, in full, all the float time available for the work involved with this request. The Contracting Officer's determination as to the number of allowable days of contract extension shall be based upon an approved project schedule and other factual information. Delays that are caused by the Contractor's own actions will not be a cause for a time extension to the contract completion date.

3.7.2 Submission Requirements

The Contractor shall submit a justification in accordance with the requirements of other appropriate contract clauses and shall include, as a minimum:

a. A list of affected activities, with their associated project schedule activity number.

b. A brief explanation of the cause(s) of the change.

c. An analysis of the overall impact of the changes proposed.

d. If requested by the Contracting Officer, the Contractor shall provide an interim project schedule update with revised activities.

3.8 DIRECTED CHANGES

If notice to proceed is issued for undefinitized work, the Contractor shall submit proposed project schedule revisions to the Contracting Officer within 14 calender days of the notice to proceed being issued. The proposed revisions to the project schedule must be approved by the Contracting Officer prior to inclusion of those changes within the project schedule. If the Contractor fails to submit the proposed revisions, the Contracting Officer may furnish the Contractor suggested revisions to the project schedule; and the Contractor shall update the project schedule with the Contracting Officer's revisions until a mutual agreement in the

revisions is reached.

3.9 OWNERSHIP OF FLOAT

Float available in the project schedule, at any time, shall not be considered for the exclusive use of either the Government or the Contractor.

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01330

SUBMITTAL PROCEDURES

-- End of Section Table of Contents --

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUBMITTAL IDENTIFICATION

Submittals required are identified by SD numbers as follows:

SD-01 Data

SD-04 Drawings

SD-07 Schedules

SD-08 Statements

SD-09 Reports

SD-13 Certificates

SD-14 Samples

SD-18 Records

SD-19 Operation and Maintenance Manuals

1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.2.1 Government Approved

Governmental approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of Section 00700 CONTRACT CLAUSE entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

1.2.2 Information Only

All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

1.3 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the CQC requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal

for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.4 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with Section 00700 CONTRACT CLAUSE "Changes" shall be given promptly to the Contracting Officer.

1.5 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

1.6 MEASUREMENT AND PAYMENT

The work of this section will not be measured for payment. The Contractor shall be responsible for the work of this section, without any direct compensation being made other than the payment received for contract items.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) representative and each item shall be stamped, signed, and dated by the CQC representative indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

3.2 SUBMITTAL REGISTER (ENG FORM 4288)

At the end of this section is one set of ENG Form 4288 listing items of equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. The Contractor will also be given the submittal register as a diskette containing the computerized ENG Form 4288 and instructions on the use of the diskette. Columns "d" through "r" have

been completed by the Government; the Contractor shall complete columns "a", "b", "c", and "s" through "u" and submit the forms (hard copy plus associated electronic file) to the Contracting Officer for approval within 7 calendar days after Notice to Proceed. The Contractor shall keep the submittal register up-to-date and shall submit it to the Government together with the monthly payment request. The approved submittal register will become the scheduling document and will be used to control submittals throughout the life of the contract. The submittal register and the progress schedules shall be coordinated.

3.3 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (a minimum of 30 calendar days exclusive of mailing time) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals. The submittal register shall provide for a reasonable timely distribution of shop drawings as they are prepared (particularly within a specific discipline, i.e.: structural, mechanical).

3.4 TRANSMITTAL FORM (ENG FORM 4025)

The sample transmittal form (ENG Form 4025) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

3.5 SUBMITTAL PROCEDURE

3.5.1 Submittal Copies

The Contractor shall submit 6 copies of each submittal (both Government approved and for information only) unless otherwise indicated. Each transmittal shall address only one submittal item. Transmittals returned for resubmission shall be resubmitted in their entirety. When approved by the Contracting Officer, routine test reports and delivery tickets may be submitted with daily quality control reports in place of following submittal procedures under this section.

3.5.2 Schedule

Shop drawings shall be submitted with ample time (a minimum of 30 calendar days exclusive of mailing time) to secure Government approval prior to the time the items covered thereby are to be delivered to the site. Additional time should be allowed for possible resubmittal. Materials fabricated or delivered without Government approval of the shop drawing will be subject to rejection. All submittals shall be made prior to commencement of applicable work, and allow adequate time for government review acceptable to the Contracting Officer.

3.5.3 Shop Drawings

Shop drawings shall be reproductions on high quality paper with clear

legible print. Drawings shall generally be bordered a minimum of one inch and trimmed to neat lines. Shop drawing quality will be subject to approval. Each shop drawing, including catalog data, shall be identified with a title block including the name of the Contractor, contract number, name and location of project, and name of the item of work or structure to which the shop drawing applies. Catalog data, including specifications and full descriptive matter, may be submitted as shop drawings. Catalog data must be supplemented as necessary to include all pertinent data to verify conformance to the contract documents. When catalog data includes non applicable data, the applicable data shall be clearly indicated.

3.5.4 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025 shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

3.6 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

3.7 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. Five copies of the submittal will be retained by the Contracting Officer and 1 copy of the submittal will be returned to the Contractor.

3.8 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

3.9 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to the following:

CONTRACTOR
(Firm Name)
_____ Approved
_____ Approved with corrections as noted on submittal data and/or attached sheets(s).
SIGNATURE: _____
TITLE: _____
DATE: _____

3.10 CONTRACTOR RECORD DRAWINGS

The Contractor shall maintain a separate set of marked-up full-scale contract drawings indicating as-built conditions. These drawings shall be maintained in a current condition at all times until completion of the work and shall be available for review by Government personnel at all times. All variations from the contract drawings, for whatever reason, including those occasioned by modifications, optional materials, and the required coordination between trades, shall be indicated. These variations shall be shown in the same general detail utilized in the contract drawings. Revisions shall be shown on all drawings and details related to the changed feature. These drawings shall be neatly prepared with clear legible print. Deleted items shall be indicated in red and added items or changed locations shall be shown in green. These drawings shall be furnished to the Contracting Officer within 30 days after the required contract completion date.

3.10.1 Operation and Maintenance (O&M) Manuals

The Contractor shall prepare independent, comprehensive O&M Manuals for each pump station. The manuals shall include operation and maintenance instructions on both Contractor furnished the Government furnished property. O&M Manuals shall be delivered to the Contracting Officer within 30 days after the required contract completion date.

3.10.2 As-Built Shop Drawings

The Contractor shall record changes to shop drawings to indicate as-built conditions. These drawings shall show all changes and revisions made up to the time the equipment is completed and accepted.

-- End of Section --

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE *(Read instructions on the reverse side prior to initiatingthis form)*	DATE	TRANSMITTAL NO.

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS *(This section will be initiated by the contractor)*

TO:	FROM:	CONTRACT NO.	CHECK ONE: ☐ THIS IS A NEW TRANSMITTAL ☐ THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SEC. NO. *(Cover only one section with each transmittal)*	PROJECT TITLE AND LOCATION		CHECK ONE: THIS TRANSMITTAL IS FOR ☐ FIO ☐ GOV'T. APPROVAL

ITEM NO. *a.*	DESCRIPTION OF ITEM SUBMITTED *(Type size, model number/etc.)* *b.*	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. *(See instruction no. 8)* *c.*	NO. OF COPIES *d.*	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE *g.*	VARIATION *(See instruction No. 6)* *h.*	FOR CE USE CODE *i.*
				SPEC. PARA. NO. *e.*	DRAWING SHEET NO. *f.*			

REMARKS

I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated.

_____

NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED *(List by Item No.)*	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.

2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.

3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288-R for each entry on this form.

4. Submittals requiring expeditious handling will be submitted on a separate form.

5. Separate transmittal form will be used for submittals under separate sections of the specifications.

6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".

7. Form is self-transmittal, letter of transmittal is not required.

8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.

9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

A	-- Approved as submitted.	E	-- Disapproved (See attached).
B	-- Approved, except as noted on drawings.	F	-- Receipt acknowledged.
C	-- Approved, except as noted on drawings. Refer to attached sheet resubmission required.	FX	-- Receipt acknowledged, does not comply as noted with contract requirements.
D	-- Will be returned by separate correspondence.	G	-- Other *(Specify)*

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

(Reverse of ENG Form 4025-R)

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01410

ENVIRONMENTAL PROTECTION

-- End of Section Table of Contents --

SECTION 01410

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

The Contractor shall perform the work minimizing environmental pollution and damage as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract.

1.1.1 Subcontractors

The Contractor shall insure that its subcontractors comply with the requirements of this section.

1.1.2 Definitions

For the purpose of this specification, environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic, cultural, and/or historical purposes. The control of environmental pollution and damage requires consideration of air, water, and land, and includes management of visual aesthetics, noise, solid waste, radiant energy, and radioactive materials, as well as other pollutants.

1.2 SUBMITTALS

Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following items shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES.

SD-08 Statements

Environmental Protection Plan; GA.

The Environmental Protection Plan shall be prepared in accordance with Paragraph ENVIRONMENTAL PROTECTION PLAN.

1.3 ENVIRONMENTAL PROTECTION PLAN

1.3.1 Implementation.

Prior to ordering required materials/equipment or commencing construction work, the Contractor shall:

a. Submit to the Contracting Officer an acceptable written Environmental Protection Plan;

b. Obtain the Contracting Officer's written acceptance of the

Environmental Protection Plan; and

c. Meet with representatives of the Contracting Officer for the purpose of developing an understanding of the requirements and methods of administration of the Contractor's Environmental Protection Plan.

1.3.2 Compliance.

Not withstanding the requirements of this section and not withstanding approval by the Contracting Officer of the Contractor's Environmental Protection Plan, nothing herein shall be construed as relieving the Contractor of all applicable Federal, State, and local environmental protection laws and regulations.

1.3.3 Contents.

The Environmental Protection Plan shall include, but shall not be limited to, the following:

a. Name(s) of person(s) within the Contractor's on-site organization who is(are) responsible for ensuring that the Environmental Protection Plan is adhered to.

b. Meeting times and personnel attendance for communication and notification of personnel and subcontractors regarding environmental requirements, and name(s) of person(s) responsible for this training.

c. The Contractor shall prepare a listing of resources needing protection, (i.e., trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, and historical, archaeological, and cultural resources); and what methods will be used to protect these resources.

d. Name(s) of person(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.

e. Procedures to be implemented to provide the required environmental protection, to comply with the applicable laws and regulations, and to correct pollution due to accident, natural causes, or failure to follow the procedures of the Environmental Protection Plan.

f. Methods and locations for waste disposal. Licenses or permits shall be submitted for solid waste disposal sites that are not an operating commercial facility. Evidence of disposal facility acceptance shall be submitted for any hazardous or toxic waste.

g. Drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials.

h. Environmental monitoring plans for the job site, including land, water, air, and noise monitoring.

i. Traffic control plans.

j. Methods of protecting surface and ground water during construction

activities.

k. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas.

l. Drawing of borrow areas.

m. Plans for restoration of landscape damage.

n. Provide video tape of the borrow areas, all haul roads, and construction areas prior to beginning work.

1.4 PERMITS

Permits obtained by the Government related to the work of this contract are attached in Section 00830 ATTACHMENTS, or referenced in Section 01000 GENERAL. The Contractor is responsible for obtaining all applicable permits or licenses(those not obtained by the Government). The Contractor shall be responsible for implementing the terms and requirements of the permits held by the Contractor or the Government. A copy of permits referenced in Section 01000 GENERAL are available for inspection in the Office of the District Engineer, Army Corps of Engineers Centre, 190 Fifth Street East, St. Paul, Minnesota 55101-1638.

1.5 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with the previously mentioned Federal, State or local laws or regulations, permits, and other elements of the Contractor's Environmental Protection Plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of proposed corrective action and take such action when approved. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping (suspending) all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or costs or damages allowed to the Contractor for any such suspensions. Failure of the Contracting Officer to notify the Contractor of any noncompliance with Federal, State, or local laws or regulations does not relieve the Contractor of the obligation to be in conformance with those requirements

1.6 PREVIOUSLY USED EQUIPMENT

The Contractor shall thoroughly clean all construction equipment previously used at other sites before it is brought into the work areas, ensuring that soil residuals are removed and that egg deposits from plant pests are not present; the Contractor shall consult with the USDA jurisdictional office for additional cleaning requirements.

1.7 PAYMENT

No separate payment or direct payment will be made for work covered under this section and such work will be considered as a subsidiary obligation of the Contractor.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 ENVIRONMENTAL RESOURCES.

The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected during the entire period of this contract. The Contractor shall confine its activities to areas defined by the drawings and specifications.

3.2 LAND RESOURCES

Prior to the beginning of any construction, the Contractor shall identify all land resources to be preserved within the Contractor's work area. The Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without permission from the Contracting Officer. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs. Stone, earth or other material displaced into uncleared areas shall be removed.

3.2.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas that need not be disturbed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, the markers shall be visible. The Contractor's personnel shall be knowledgeable of the purpose for marking and/or protecting particular objects.

3.2.2 Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features indicated and defined on the drawings to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques.

3.2.3 Unprotected Erodible Soils

Earthwork brought to final grade shall be finished as indicated. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils. Except in cases where the constructed feature obscures borrow areas, quarries, and waste material areas, these areas shall not initially be totally cleared. Clearing of such areas shall progress in reasonably sized increments as needed to use the developed areas as approved by the Contracting Officer.

3.2.4 Disturbed Areas

The Contractor shall effectively prevent erosion and control sedimentation through approved methods including, but not limited to, the following:

a. Retardation and control of runoff. Runoff from the construction site or from storms shall be controlled, retarded, and diverted to protected drainage courses by means of diversion ditches, benches,

berms, and by any measures required by area wide plans under the Clean Water Act.

b. Erosion and sedimentation control devices. The Contractor shall construct or install temporary and permanent erosion and sedimentation control features as indicated or required. Berms, dikes, drains, sedimentation basins, grassing, and mulching shall be maintained until permanent drainage and erosion control facilities are completed and operative.

c. Sediment basins. Sediment from construction areas shall be trapped in temporary or permanent sediment basins. The sediment basins shall be constructed in accordance with basin plans when shown on the drawings. The basins shall accommodate the runoff of a local 5 year storm, except that the design storm event required by the watershed district, watershed management board, or similar governing agency shall be used if available. After each storm, the basins shall be pumped dry and accumulated sediment shall be removed to maintain basin effectiveness. Overflow shall be controlled by paved weirs or by vertical overflow pipes. The collected topsoil sediment shall be reused for fill on the construction site, and/or stockpiled for use at another site. The Contractor shall institute effluent quality monitoring programs as required by State and local environmental agencies.

3.2.5 Contractor Facilities and Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only when approved. Borrow areas shall be managed to minimize erosion and to prevent sediment from entering nearby waters. Spoil areas shall be managed and controlled to limit spoil intrusion into areas designated on the drawings and to prevent erosion of soil or sediment from entering nearby waters. Spoil areas shall be developed in accordance with the grading plan indicated on the drawings. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas from despoilment.

3.3 WATER RESOURCES

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters. Toxic or hazardous chemicals shall not be applied to soil or vegetation when such application may cause contamination of the fresh water reserve. Monitoring of water areas affected by construction shall be the Contractor's responsibility. All water areas affected by construction activities shall be monitored by the Contractor.

3.3.1 Washing and Curing Water

Waste waters directly derived from construction activities shall not be allowed to enter water areas. Waste waters shall be collected and placed in retention ponds where suspended material can be settled out or the water evaporates to separate pollutants from the water.

3.3.2 Cofferdam and Diversion Operations

Construction operations for dewatering, and removal of cofferdams, shall

be controlled at all times to limit the impact of water turbidity on the habitat for wildlife and on water quality for downstream use. The Contractor shall plan its operations and perform all work necessary to minimize adverse impact or violation of the water quality standards applicable to this contract.

3.3.3 Stream Crossings

Stream crossings shall be controlled during construction. Crossings shall provide movement of materials or equipment which do not violate water pollution control standards of Federal, State, or local governments.

3.3.4 Fish and Wildlife

The Contractor shall minimize interference with, disturbance to, and damage of fish and wildlife. Species that require specific attention along with measures for their protection shall be listed by the Contractor prior to beginning of construction operations.

3.3.5 Fuel Handling

The Contractor shall provide containment around fueling areas to ensure that spills do not reach waters of the state.

3.4 AIR RESOURCES

Equipment operation and activities or processes performed by the Contractor in accomplishing the specified construction shall be in accordance with State air pollution statutes, rules, and regulations and all Federal emission and performance laws and standards. Ambient Air Quality Standards set by the Environmental Protection Agency shall be maintained. Monitoring of air quality shall be the Contractor's responsibility. All air areas affected by the construction activities shall be monitored by the Contractor.

3.4.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials, such as from asphaltic batch plants; shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, light bituminous treatment, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. The Contractor must have sufficient, competent equipment available to accomplish these tasks. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs.

3.4.2 Hydrocarbons and Carbon Monoxide

Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

3.4.3 Odors

Odors shall be controlled at all times for all construction activities, processing and preparation of materials.

3.4.4 Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize environment damage by noise. The Contractor shall use methods and devices to control noise emitted by equipment to within the levels specified in the "Safety and Health Requirements Manual" referenced in the clause "Accident Prevention" in Section 00700 CONTRACT CLAUSES.

3.5 WASTE DISPOSAL

The Contracting Officer shall be informed of any waste disposal requirements identified during the work and not covered in the Environmental Protection Plan. Waste disposal plans shall be updated and submitted as required

3.5.1 Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. Handling and disposal shall be conducted to prevent contamination. Segregation measures shall be employed so that no hazardous or toxic waste will become co-mingled with solid waste. The Contractor shall transport solid waste off Project Site and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. The Contractor shall comply with Federal, State, and local laws and regulations pertaining to the use of landfill areas.

3.5.2 Chemical Wastes

Chemical waste shall be stored in corrosion resistant containers, removed from the work areas, and disposed of in accordance with Federal, State, and local laws and regulations.

3.6 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Existing historical, archaeological, and cultural resources within the Contractor's work area will be so designated by the Contracting Officer if any have been identified. The Contractor shall take precautions to preserve all such resources as they existed at the time they were first pointed out. The Contractor shall provide and install protection for these resources and be responsible for their preservation during the life of the contract. If during excavation or other construction activities any previously unidentified or unanticipated resources are discovered or found, all activities that may damage or alter such resources shall be temporarily suspended. Resources covered by this paragraph include but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rocks or coral alignments, pavings, wall, or other constructed features; and any indication of agricultural or other human activities. Upon such discovery or find, the Contractor shall immediately notify the Contracting Officer.

3.7 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all areas used for construction.

3.8 RESTORATION OF LANDSCAPE DAMAGE

The Contractor shall restore all landscape features damaged or destroyed during construction operations outside the neat lines of project features. Such restoration shall be in accordance with the Environmental Protection Plan. This work shall be accomplished at the Contractor's expense and at no additional cost to the Government.

3.9 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.10 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities, devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental pollution control.

-- End of Section --

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SECTION 01451

CONTRACTOR QUALITY CONTROL

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SECTION 01451

CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3740	(1999) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E 329	(1998) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.2 SUBMITTALS

Government approval is required for all submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-08 Statements

Contractor Quality Control (CQC) Plan; GA

The quality control plan shall be prepared in accordance with paragraph QUALITY CONTROL PLAN.

Laboratory Quality Management Manual; FIO

The manual as specified in paragraph TESTS - TESTING LABORATORIES - CAPABILITY CHECK shall be submitted.

SD-18 Records

Documentation of work; FIO

a. Construction Quality Control Management Report

b. CQC Report

c. Preparatory Phase Checklist

d. Initial Phase Checklist

Daily records and weekly reports shall be prepared in accordance with paragraph DOCUMENTATION.

1.3 PAYMENT

The Contractor shall be responsible for the work of this section, without any direct compensation being made other than the payment received for contract items.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause titled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with quality requirements specified in the contract. The project superintendent in this context shall mean the individual with the responsibility for the overall management of the project including quality and production.

3.2 QUALITY CONTROL PLAN

3.2.1 General

The Contractor shall furnish for review by the Government, not later than 15 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used. The Government will consider an interim plan for the first 30 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

3.2.2 Content of the CQC Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project superintendent or someone higher in the Contractor's organization.

b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.

c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Government.

d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.

e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Contracting Officer.)

f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.

g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.

h. Reporting procedures, including proposed reporting formats.

i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

3.2.3 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.4 Notification of Changes

After acceptance of the CQC Plan, the Contractor shall notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 10 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 Personnel Requirements

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure contract compliance. The Contractor shall provide a CQC organization which shall be at the site at all times during progress of the work and with complete authority to take any action necessary to ensure compliance with the contract. All CQC staff members shall be subject to acceptance by the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a graduate engineer, graduate architect, or a graduate of construction management, with a minimum of 5 years experience in related duties on construction similar to this contract. This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be independent from project superintendent and be assigned no other duties. An alternate for the CQC System Manager shall be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate shall be the same as for the designated CQC System Manager.

3.4.3 Additional Requirement

In addition to the above qualifications, the CQC System Manager shall have completed the course entitled "Construction Quality Management For Contractors". This course is periodically offered through the Government in the Minneapolis - St. Paul, Minnesota metropolitan area.

3.4.4 Organizational Changes

The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, shall be made as specified in Section 01330 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of work as follows:

3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

a. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by Government personnel until final acceptance of the work.

b. A review of the contract drawings.

c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.

d. Review of provisions that have been made to provide required control inspection and testing.

e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.

f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.

g. A review of the appropriate activity hazard analysis to assure safety requirements are met.

h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.

i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.

j. Discussion of the initial control phase.

k. The Government shall be notified at least 48 hours in advance of beginning the preparatory control phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.

b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.

c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.

d. Resolve all differences.

e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.

f. The Government shall be notified at least 48 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is

resumed after a substantial period of inactivity; or if other problems develop.

3.7 TESTS

3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a testing laboratory meeting the requirements listed under paragraph CAPABILITY CHECK, or establish a testing laboratory at the project site meeting those requirements. The Contractor shall perform the following activities and record and provide the following data:

a. Verify that testing procedures comply with contract requirements.

b. Verify that facilities and testing equipment are available and comply with testing standards.

c. Check test instrument calibration data against certified standards.

d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.

e. Results of all tests taken, both passing and failing tests, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

3.7.2 Testing Laboratories

3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329. The Contractor shall submit a Quality Management Manual meeting the requirements of ASTM D 3740 and ASTM E 329 for each laboratory to be used, including on-site project laboratories.

3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of $1000.00 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently

selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Contracting Officer. Coordination for each specific test, exact delivery location, and dates will be made with the Contracting Officer.

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Near the end of the work, or any increment of the work established by a time stated in the Special Clause, "Commencement, Prosecution, and Completion of Work", or by the specifications, the CQC Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings and specifications shall be prepared and included in the CQC documentation, as required by paragraph DOCUMENTATION. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Government that the facility is ready for the Government Pre-Final Inspection.

3.8.2 Pre-Final Inspection

The Government will perform the Pre-Final Inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government, so that a Final Inspection with the customer can be scheduled. Any items noted on the Pre-Final Inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance the Final Acceptance Inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The Final Acceptance Inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final Inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the Final Acceptance Inspection and shall include

the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the Final Acceptance Inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

a. Contractor/subcontractor and their area of responsibility.

b. Operating plant/equipment with hours worked, idle, or down for repair.

c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.

d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase shall be identified (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.

e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.

f. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.

g. Off-site surveillance activities, including actions taken.

h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.

i. Instructions given/received and conflicts in plans and/or specifications.

j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of

the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.10 SAMPLE FORMS

The following sample forms are enclosed at the end of this section:

a. Construction Quality Control Management Report

b. CQC Report

c. Preparatory Phase Checklist

d. Initial Phase Checklist

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

3.12 IMPLEMENTATION OF GOVERNMENT RESIDENT MANAGEMENT SYSTEM FOR CONTRACTOR QUALITY CONTROL OF CONTRACT

The Contractor shall utilize the Contractor Quality Control (CQC) module of the Resident Management System (RMS). The RMS-CQC module is a computer program which is executable on IBM compatible computers with 80386, 80486 and Pentium processors. This module includes a daily CQC reporting form which must be used. The module shall be completed to the satisfaction of the Contracting Officer prior to any contract payment and shall be updated as required. The Contractor shall complete module elements including:

Prime Contractor staffing
Subcontractor information, including name, address, trade, and point of contact
Submittal information, including description, activity number, review period, expected procurement period
Quality control testing
Definable features of work
Installed property listing
Transfer property listing
Pay activity and activity information
Planned cumulative progress earnings
Scheduled employee education required by the specifications
Insurance expiration dates

3.12.1 Revisions

The Contractor shall acknowledge receipt of Government comments relating to

the RMS-CQC module by specific number reference on his Daily CQC report. The daily CQC report shall also report when corrections are implemented.

3.12.2 Pay Activity

The sum of all pay activity values shall equal the contract amount. Bid items may include multiple activities, but activities shall only be assigned to one bid item.

-- End of Section --

CONSTRUCTION QUALITY CONTROL MANAGEMENT REPORT

Contractor Production

Contractor's Name

_____

_____

Daily Report No _____ Date _____
Contract No. _____

Project Title & Location: _____

Weather _____ Precipitation _____ in. Temp. _____ Min _____ Max.

1. Contract/Subcontractors and Area of Responsibility:

NUMBER:	TRADE	HOURS	EMPLOYER	LOCATION/DESCRIPTION OF WORK

2. Operating Plant or Equipment. (Not hand tools)

Plant/Equipment	Date of Arrival/Departure	Date of Safety Check	Hours Used	Hours Idle	Hours Repair

CQC Report

1. Work performed today: (Indicate location and description of work performed by prime and/or subcontractors by letter in table above).

2. Results of control activities: (Indicate whether P - Preparatory, I - Initial, or F - Follow-up Phase. When a P or I meeting is conducted, complete attachment 1-A or 1-B, respectively. When network analysis system is used, identify work by use of I-J numbers)

3. Test performed as required by plans and/or specifications:

4. Material received:

CQC Report (Cont'd)

5. Submittals Reviewed:

(a) Submittal No.	(b) Spec/Plan Reference	(c) By Whom	(d) Action

6. Off-site surveillance activities, including action taken:

7. Job safety: (Report violations; Corrective instructions given; Corrective actions taken).

8. Remarks: (Instructions received or given. Conflict(s) in Plans and/or Specifications)

Contractor's Verification: On behalf of the Contractor, I certify this report is complete and correct, and all materials and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.

CQC System Manager

PREPARATORY PHASE CHECKLIST

Contract No.: _____ Date: _____
Definable Feature: _____ Spec Section: _____

Government Rep Notifie _____ Hours in Advance Yes ___ No ____

I. Personnel Present.

	Name	Position	Company/Government
1			
2			
3			
4			
5			
6			
7			

(List additional personnel on reverse side)

II. Submittals.

1. Review submittals and/or submittal log 4288. Have all submittals been approved? Yes _____ No _____

If No, what items have not been submitted?
a _____
b _____
c _____

2. Are all materials on hand? Yes _____ No _____
a _____
b _____
c _____

3. Check approved submittals against delivered material. (This should be done as material arrives).

Comments _____

III. Material Storage.
Are materials stored properly? Yes _____ No _____
If No, what action is taken?

Preparatory Phase Checklist (Cont'd)

IV. Specifications.

1. Review each paragraph of specifications.

2. Discuss procedure for accomplishing the work.

3. Clarify any differences.

V. Preliminary Work.
Ensure preliminary work is correct.
If not, what action is taken _____

VI. Testing.

1. Identify test to be performed, frequency, and by whom.
2. When required? _____
3. Where required _____
4. Review Testing Plan _____
5. Has test facilities been approved? _____

VII. Safety.
1. Review applicable portion of EM 385-1-1 _____
2. Activity Hazard Analysis approved? Yes _____ No _____

VIII. Corps of Engineers comments during meeting.

_____
CQC System Manager

INITIAL PHASE CHECKLIST

Contract No. _____ Date _____

Definable Feature _____

Government Rep Notified _____ Hours in Advance Ye _____ No _____

I. Personnel Present:

	Name	Position	Company/Government
1			
2			
3			
4			
5			
6			

(List additional personnel on reverse side)

II. Identify full compliance with procedures identified at preparatory. Coordinate plans, specifications, and submittals.
Comments: _____

III. Preliminary Work. Ensure preliminary work is complete and correct.
If not, what action is taken? _____

IV. Establish Level of Workmanship.
1. Where is work located? _____
2. Is a sample panel required? Yes _____ N _____
3. Will the initial work be considered as a sample? Ye _____ N _____
(If yes, maintain in present condition as long as possible).

V. Resolve any Differences.
Comments _____

Review job conditions using EM 385-1-1 and job hazard analysis.
Comments: _____

_____
CQC System Manager

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES

-- End of Section Table of Contents --

SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-04 Drawings

Site Plan; FIO.

The Contractor shall prepare a site plan indicating the proposed location and dimensions of any area to be fenced and used by the Contractor, the number of trailers to be used, avenues of ingress/egress to the fenced area and details of the fence installation. Any areas which may have to be graveled to prevent the tracking of mud shall also be identified. The Contractor shall also indicate if the use of a supplemental or other staging area is desired.

Government Field Office; FIO.

The Contractor shall submit a preliminary plan and description of the mobile office facilities which it proposes to furnish prior to proceeding with procurement thereof.

1.2 AVAILABILITY AND USE OF UTILITY SERVICES

1.2.1 Temporary Electrical Facilities

The Contractor shall be responsible for coordination and costs for electrical power required for the Contractor's operations, including all costs for utility company hookup, installation/dismantling of transformers and distribution lines. In general, the Contractor shall establish it's own service connection with the utility company. If the Contractor proposes to use an existing Government service connection, a request shall be submitted for approval to verify the Contractor's use will not interfere with operation of the facilities, and the monthly service fees will be paid for in whole (including Government power consumption) by the Contractor.

1.2.2 Sanitation

The Contractor shall provide and maintain within the construction area field-type sanitary facilities in accordance with EM 385-1-1. These facilities shall include but not be limited to toilet, washing, and drinking water facilities

1.2.3 Telephone

The Contractor shall make arrangements and pay all costs for their telephone facilities desired. Government personnel will not take or deliver messages for the Contractor.

1.3 PROTECTION AND MAINTENANCE OF TRAFFIC

During construction the Contractor shall provide access and temporary relocated roads as necessary to maintain traffic. The Contractor shall maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads.

1.3.1 Haul Roads

The Contractor shall, at its own expense, construct access and haul roads necessary for proper prosecution of the work under this contract. Haul roads shall be constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided. The Contractor shall provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control, although optional, shall be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and hauling roads shall be subject to approval by the Contracting Officer. Lighting shall be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations. Upon completion of the work, haul roads designated by the Contracting Officer shall be removed.

1.3.2 Barricades

The Contractor shall erect and maintain temporary barricades to limit public access to hazardous areas. Such barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

1.4 CONTRACTOR'S TEMPORARY FACILITIES

1.4.1 Administrative Field Offices

The Contractor shall provide and maintain administrative field office facilities within the construction area at the designated site. Government office and warehouse facilities will not be available to the Contractor's personnel.

1.4.2 Staging Area

The boundary limits of the grounds made available for the Contractor's use

during the life of the contract are shown on the drawings as Work Limits. Trailers, materials, or equipment shall not be placed or stored outside the work limits.

1.5 PLANT COMMUNICATION

Whenever the Contractor has the individual elements of its plant so located that operation by normal voice between these elements is not satisfactory, the Contractor shall install a satisfactory means of communication, such as telephone or other suitable devices. The devices shall be made available for use by Government personnel.

1.6 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, the Contractor shall furnish and erect temporary project safety fencing at the work site. The safety fencing shall be a high visibility orange colored, high density polyethylene grid or approved equal, a minimum of 42 inches high, supported and tightly secured to steel posts located on maximum 10 foot centers, generally located to encompass the active construction areas. The safety fencing shall be maintained by the Contractor during the life of the contract and, upon completion and acceptance of the work, shall become the property of the Contractor and shall be removed from the work site.

1.7 PAYMENT

The Contractor shall be responsible for the work of this section without any direct compensation being made other than payment received for contract items.

PART 2 PRODUCTS

2.1 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN

2.1.1 Bulletin Board

Immediately upon beginning of work, the Contractor shall provide a weatherproof glass-covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, and other information approved by the Contracting Officer. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer. Legible copies of the aforementioned data shall be displayed until work is completed. Upon completion of work the bulletin board shall be removed by and remain the property of the Contractor.

2.1.2 Project and Safety Signs

The Contractor shall furnish and erect a Project sign and a Safety sign in a location selected by the Contracting Officer at the project site within 15 days after receipt of the notice to proceed. The requirements for the signs and their content shall be as shown on the drawings at the end of this section. The data required by the safety sign shall be corrected daily. Signs shall be maintained throughout the construction period, and upon completion of the project, the signs shall be removed from the site. The PROJECT DESCRIPTION and PROJECT NAME shall be as follows:

PROJECT DESCRIPTION: Flood Control Project
Grand Forks, North Dakota

PROJECT NAME: Phase 1 Levees

2.2 GOVERNMENT FIELD OFFICE

The Contractor shall provide and maintain for the life of the contract an approved mobile office (mobile home style) meeting the following requirements as to space and facilities for the exclusive use of the Government. The unit shall be ready for occupancy within 30 calendar days after notice to proceed. The unit shall provide a minimum of 400 square feet of floor area and shall include two private offices, each having approximately 100 square feet of floor area and a storage closet. The unit shall have two entrance doors. The remaining space is to be utilized as one large office, a toilet room, a chest of drawers and a storage area for coats, etc. The unit shall be provided with a toilet room consisting of a stool and lavatory and an electric heater. The unit interior headroom shall be no less than a nominal 8'-0".

2.2.1 Location

The Contractor shall locate the portable mobile home type field office at or near the Contractor's field office site at a location approved by the Contracting Officer. Four parking spaces shall be reserved for Government vehicles at the Government trailer.

2.2.2 Construction.

The Government field office shall be similar in quality and age as the Contractor's field office, if provided. Exterior and interior finishes shall be free from color fade, chipping, or peeling. The unit shall be set level on blocking, be provided with plywood skirting, and be anchored to the ground for protection against wind damage. Exterior doors shall be provided with screens and outside hasps for use with padlocks. The unit shall be electrically wired for fluorescent ceiling lighting fixtures and weather proof porch lights at each entrance door, along with switches, duplex convenience outlets, and a master switch and fuse box as required. The entire unit shall be adequately insulated with fiberglass insulation and vapor barrier. Dead air crawl space shall be properly ventilated. Heating and air conditioning facilities shall be provided to maintain an ambient inside temperature of 68 degrees F. The unit shall be weather proof, and furnished with a forced air type heating plant, either gas or oil with hot and cold air ducts adequate to supply even heat throughout the unit. Air conditioning shall be furnished with capacity as recommended by the manufacturer for the trailer size. A central air conditioning system shall be provided.

2.2.3 Utilities.

The Contractor shall be responsible for service fees in connection with electrical power and heating (natural gas or oil service). The Contractor shall also be responsible for service fees in connection with the water supply, sanitary waste system, and telephone as indicated below. When available, city water and sewer system connections are preferred.

a. Sanitary Facilities. In the absence of a city sewer connection, holding tanks shall be provided. The lavatory shall discharge into an outside underground holding tank with a capacity of not less than 400

gallons and a vented drain. The Contractor shall provide year-round pumping of the holding tank as required. Subject to approval, a serviced chemical toilet may be used.
b. Potable Water. In the absence of a city water connection, a potable water storage tank of not less than 300 gallons capacity shall be furnished with adequate supply filling connections and screened vent, and shall be stainless steel or plastic with a drain cock of not less than ½ inch size. Upon completion of the job, the Contractor shall remove the underground holding tank and backfill the excavation. The Contractor shall provide potable water for the storage tank if service connections are not provided.
c. Telephone. The Contractor shall be responsible for installation of telephone at the Government office. The telephone hook-up should be placed on a separate account from the Contractor's phone so that it can be transferred to the Government after installation. The Government will be responsible for the telephone service to the Government field office after installation.

2.2.4 Furnishings.

The following furnishings shall be provided for the Government office:

a. A hot and cold drinking water dispenser. The Contractor shall provide drinking water for the dispenser for the duration of the contract
b. Bulletin board, minimum size 6 square feet
c. A cabinet shall be supplied along a side wall with minimum nominal dimensions 2 feet wide, 3 feet high and 6 feet long. The cabinet shall include a finished wood or laminate counter. Two shelves, one above and one below the cabinet, shall be provided for storage.
d. Sign. The contractor shall securely attach to the unit exterior and adjacent to the main entrance door, as approved, a 24 inch by 36 inch sign with the Corps of Engineers castle insignia with wording as specified
e. Stoop. A stoop with 8 inch risers and handrails shall be provided at each entrance door.
f. Windows. All windows shall be provided with sash and security screens along with shades, blinds or similar features that allow for the complete coverage of the windows on the inside.
g. Lavatory. A 5 by 24 inch metal shelf and 15 by 20 inch wood or metal framed plate glass mirror shall be provided above the lavatory.

2.2.5 Furniture

Office furniture shall be coordinated with respect to style, color, and upholstery. The following furniture shall be provided:

a. Two desks either wood or steel, double pedestal type, top approximately 60 inches by 34 inches, with lock.
b. Two swivel armchairs with tilting seat and adjustable spring back.
c. Two filing cabinets, four-drawer legal size, with lock.
d. One drafting table stool, non-tilting, rotary type with back and circular footrest.
e. One drafting table, metal and/or wood, 36 inches by 48 inches
f. One conference table, 3/4 inch thick by 72 inches long by 36 inches wide with solid core construction top.
g. Eight chairs for conference table, either wood or steel construction, with cushioned seat and backrest
h. One rack for hanging full size drawings.

2.2.6 Office Equipment

The following equipment shall be provided:

a. One desk top facsimile (FAX) machine with modem BPS speeds of 9600,7200,4800, and 2400; an effective scanning width of 11.7 inches and line scanning density of 8 pels/mm horizontal and an effective scanning width of 7.7 inches and line scanning density of 3.85 lines/mm vertical. Initially supply four reams of paper(500 sheets per ream).

b. One desk top copying machine with an indirect dual component dry tone process. Paper copy sizes shall be a maximum of 11 inches by 17 inches and a minimum of 4.25 inches by 5.5 inches. The machine shall have a halogen lamp light source and an automatic sheet feed (single cassette). Initially supply four reams (500 sheets per ream) of white copying paper and furnish a complete maintenance service contract/agreement for the machine.

c. One personal computer, minimum 433 megahertz, 4 gigabyte hard drive, 64 megabyte of RAM, CD ROM Reader; 17" monitor (26 dot pitch maximum), mouse and keyboard. The software provided with the computer will be Microsoft "Windows 95" or better and Microsoft "Office Professional" or approved equivalent.

d. One laser printer, HP 4000N or approved equivalent.

2.2.7 Maintenance

The Contractor shall maintain the field office for the life of the contract. The Contractor shall be responsible for maintaining and paying for all costs associated with the following services:

a. Supplies. Toilet paper, paper toweling, paper and supplies for the FAX and copy machines shall be provided. Supply water for the drinking water dispensor. Supply water for the lavatory if a service connection is not provided for potable water

b. Maintenance of office equipment. Include a maintenance service contract/agreement for operation of the Fax and Copy machines

c. Janitorial Service. The Contractor shall provide daily janitorial service and provide all janitorial and sanitary supplies as well as trash removal service.

d. Snow removal. Maintenance of site access including snow removal service is the responsibility of the Contractor.

e. Utilities. The Contractor is responsible for maintaining and paying all costs assocated with utility services including water supply, sanitary waste system, electrical power and natural gas or oil service.

PART 3 EXECUTION

3.1 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site. Any dirt or mud which is tracked onto paved

or surfaced roadways shall be cleaned away. Materials resulting from demolition activities which are salvageable shall be stored within the fenced area described above or at the supplemental storage area. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored.

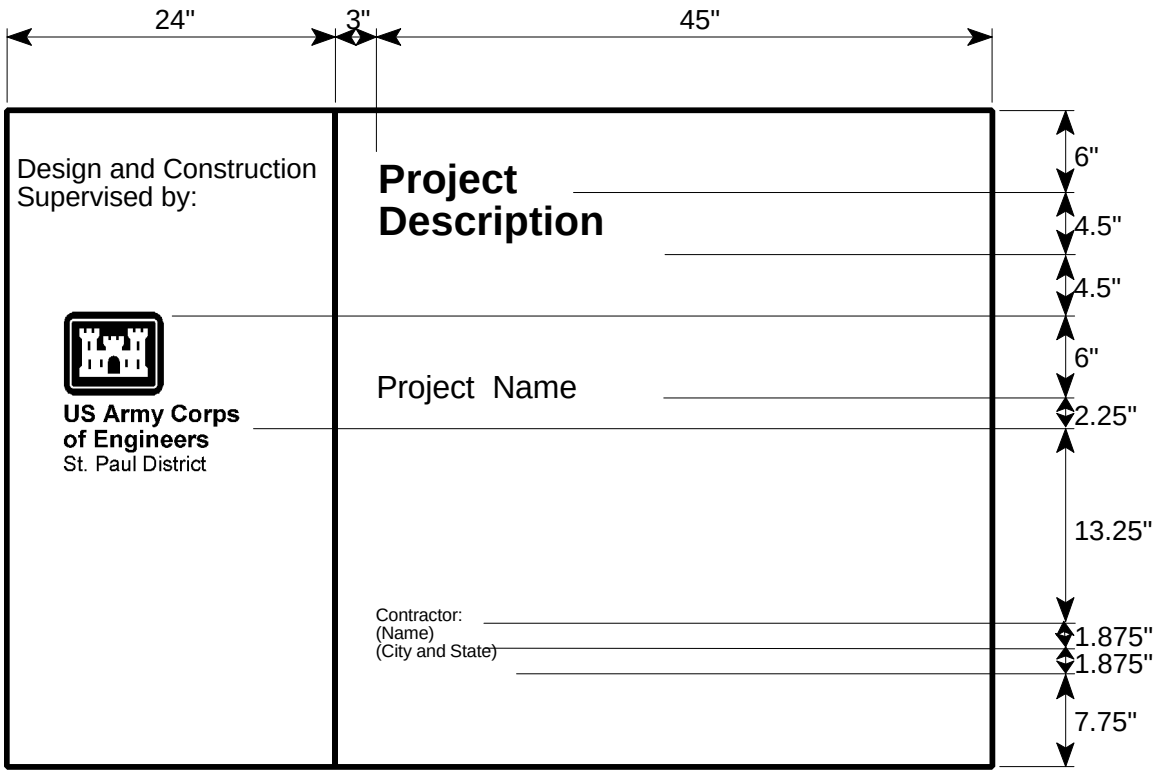
3.2 RESTORATION OF STORAGE AREA

Upon completion of the project and after removal of trailers, materials, and equipment from within the fenced area, the fence shall be removed and will become the property of the Contractor. Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including top soil and seeding as necessary.

-- End of Section --

PROJECT SIGN

The graphic format tor this 4' x 6' sign panel follows the legend guidelines and layout as specified below. The large 4' x 4' section of the panel on the right is to be white with black legend. A 2' x 4' decal provided by the Corps shall be placed on the left side of the sign panel.



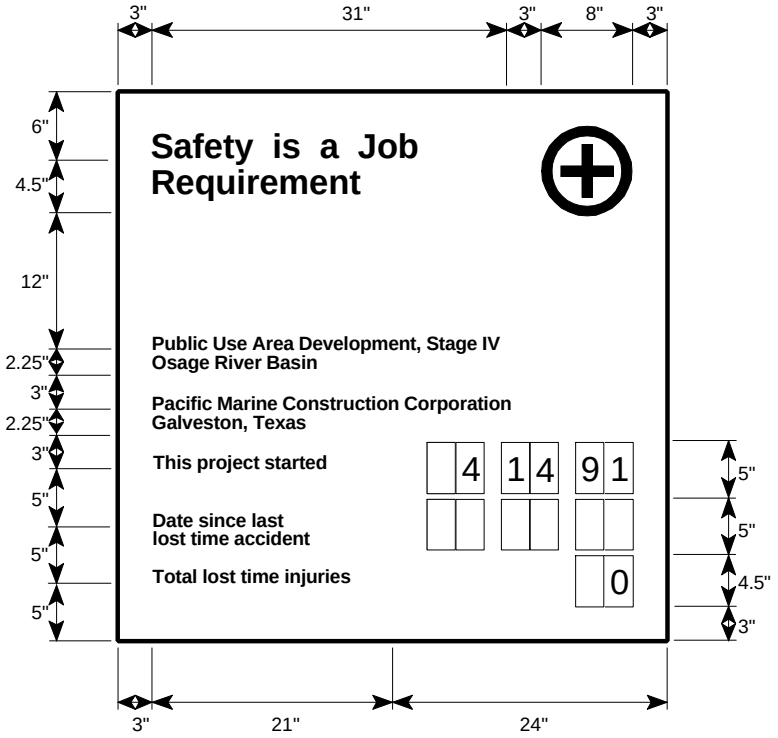
Project Description:
One to three line project title legend describes the work being done under this contract.
Color: Black; Typeface: 3" Helvetica Bold; Maximum line length: 42".

Project Name:
One to three line identification of project or facility.
Color: Black; Typeface: 1.5" Helvetica Bold; Maximum line length: 42".
Cross-align the first line of PROJECT NAME with the first line of the Corps Signature as shown.

Contractor:
One to five line identification of prim e contractors including: type (architect, general contractor, etc.), corporate or firm name, city, state.
Color: Black; Typeface: 1.25" Helvetica Bold; Maximum line length: 21".

All typography is flush left and ragged right, upper and lower case with initial capitals only as shown. Letter and word spacing to follow Corps Standards (EP 310-1-6a and 6b).

SAFETY SIGN



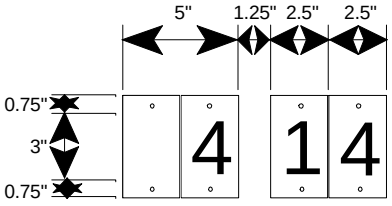
All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter and word spacing to follow Corps Standards (EP 310-1-6a and 6b).

Legend Group 1: Standard two-line title "Safety is a Job Requirement" with (8" od.) Safety Green First Aid logo. Typeface: 3" Helvetica Bold; Color: Black.

Legend Group 2: One- to two-line project title legend describes the work being done under this contract and name of host project. Typeface: 1.5" Helvetica Regular; Color: Black; Maximum line length: 42".

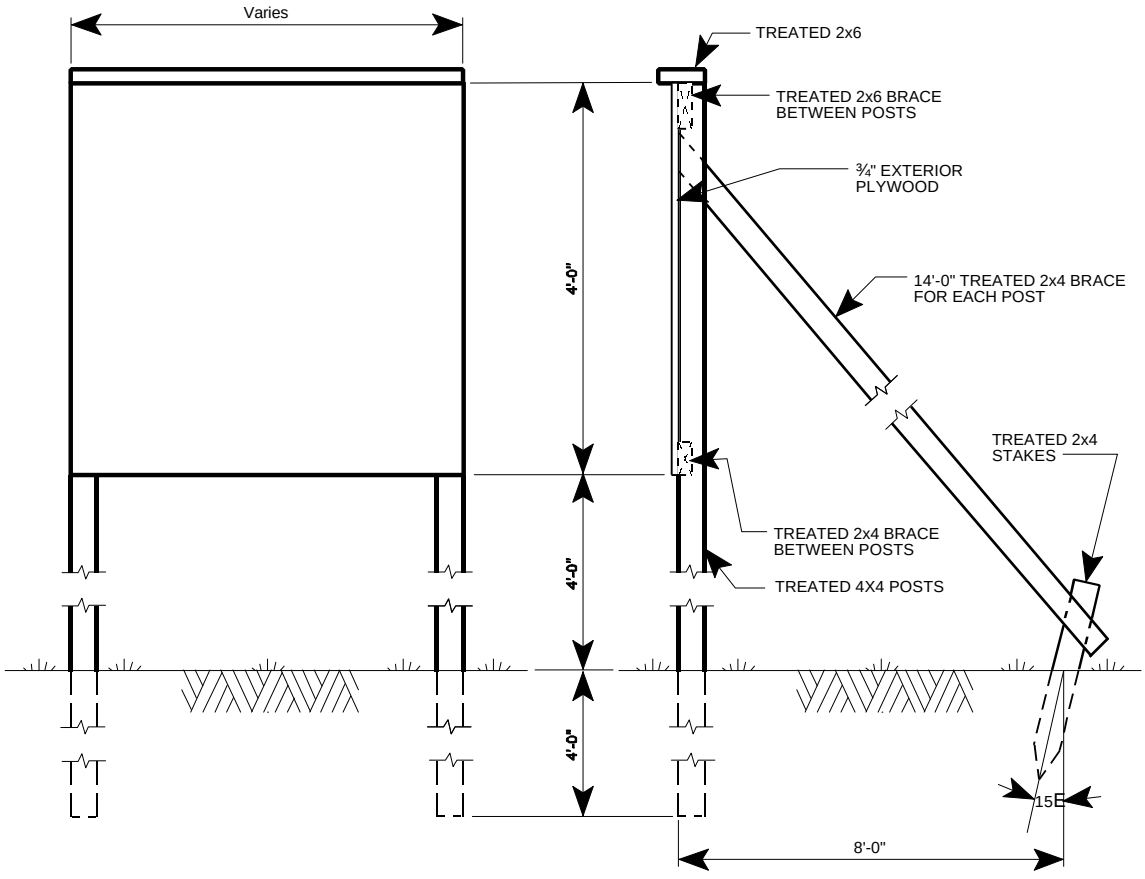
Legend Group 3: One- to two-line identification: name of prime contractor and city, state address. Typeface: 1.5" Helvetica Regular; Color: Black; Maximum line length: 42".

Legend Group 4: Standard safety record captions as shown. Typeface: 1.25" Helvetica Regular; Color: Black.



Replaceable numbers are to be mounted on white 0.060 aluminum plates and screw-mounted to background. Typeface: 3" Helvetica Regular; Color: Black; Plate size: 2.5" x 4.5".

SIGN ERECTION DETAILS



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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01568

NORTH DAKOTA POLLUTANT DISCHARGE ELIMINATION SYSTEM

-- End of Section Table of Contents --

SECTION 01568

NORTH DAKOTA POLLUTANT DISCHARGE ELIMINATION SYSTEM

PART 1 GENERAL

1.1 GENERAL

This section covers best management practices to be implemented for prevention of storm water pollution as required by the National Pollutant Discharge Elimination System (NPDES). The North Dakota Department of Health is responsible for administering permits for NPDES in the state of North Dakota. The Government has determined that the project work included under this contract requires NPDES permitting. The requirements herein supplement those covered in Section 01410 ENVIRONMENTAL PROTECTION.

1.1.1 Definitions

The following terms apply to this specification and the general permit, unless redefined in subsequent paragraphs:

a. "Plan" means the Temporary Erosion and Sediment Control Plan.

b. "EPA" means the United States Environmental Protection Agency.

c. "Department" means the North Dakota Department of Health, Division of Water Quality.

d. "NPDES" means the National Pollutant Discharge Elimination System.

e. "NDPDES" means the North Dakota Pollutant Discharge Elimination System.

f. "Owner" as referred to in the general permit shall mean the Federal Government.

g. "Permittees" as referred to in the general permit shall mean the Federal Government and Contractor.

h. "General Permit" means the general permit authorization to discharge storm water associated with a construction activity under the National Pollutant Discharge Elimination System/State Disposal System Permit Program.

i. "BMP" means Best Management Practices.

j. "NDDOH" means the North Dakota Department of Health.

1.1.2 Contract Drawings

The following features are shown on or can be determined from the contract drawings:

a. The drainage patterns and approximate slopes anticipated after the

major grading activities.

b. Areas of soil disturbance.

c. The location(s) where stabilization practices are expected to occur.

d. Typical details showing suggested Best Management Practices (BMPs) for erosion and sediment control.

e. Waters of the State.

f. Final site stabilization.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA/832/R-92/005	Storm Water Management for Construction Activities - Developing Pollution Prevention Plans and Best Management Practices

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION (NDDOT)

NDDOT 856	Standard Specifications for Road and Bridge Construction (1997 Edition), Erosion Control Blanket

1.3 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-04 Drawings

Temporary Erosion And Sediment Control Plan; FIO.

A specific Temporary Erosion and Sediment Control Plan shall be submitted in accordance with paragraph PERMIT COMPLIANCE AND ADDITIONAL REQUIREMENTS.

SD-18 Records

Notice of Intent (NOI); GA.

A copy of the NOI (NDDOH Form SFN 19145) shall be submitted to the Contracting Officer at the same time it is transmitted to the state.

Notice of Termination; FIO.

A copy of the notice of termination shall be submitted to the Contracting Officer at the same time it is transmitted to the state.

1.4 PERMIT COMPLIANCE AND ADDITIONAL REQUIREMENTS

The Contractor shall comply with the requirements of Permit No. NDR03-0000. The following define additional requirements and clarify which requirements of the Permit are to be performed by either the Contractor, the Government, or both.

1.4.1 Schedule

No contract project construction activities which requires an NPDES permit may commence until the NDPDES permit is valid.

1.4.2 Temporary Erosion And Sediment Control Plan

The contract drawings show typical details of suggested best management practices (BMPs) for erosion and sediment control taken from EPA/832/R-92/005. The BMPs, together with applicable portions of the site drawings and specifications form an initial plan for temporary erosion and sediment control. The Contractor shall finalize and implement the plan. The finalized plan, together with documentation, shall be in accordance with the general permit NDR03-0000. The plan shall be maintained at the site and made available to federal, state, and local officials as requested. The Contractor shall determine the specific BMPs for erosion and sediment control (including the types, locations, and installation scheduling of erosion and sediment controls). These BMPs and corresponding material specifications and shop drawings shall be included in the Plan.

1.4.3 Notice of Intent (NOI)

The NOI must be signed by the Government and the Contractor. A blank copy of the form (SFN 19145) is included at the end of this section. Immediately after contract award, the Contractor shall complete the form and plan, obtain signature by the Government, and submit the form with a copy of the Plan to the state. The NOI shall be post marked at least 30 days in advance of any ground breaking activities. The Contractor is responsible for payment of the application fee.

1.4.4 Permanent Erosion And Sediment Control Plan

The Government has developed the Permanent Erosion and Sediment Control Plan and will maintain availability of the plan to federal, state, and local officials as required in the General Permit.

1.5 MEASUREMENT AND PAYMENT

The Contractor shall be responsible for the work of this section, without any direct compensation being made other than the payment received for contract items.

PART 2 PRODUCTS

2.1 SILT FENCE

Silt fence shall be manufactured and installed as shown on drawings. On level sites with minimal potential for sediment loading, the wire fabric may be omitted.

2.2 STRAW BALES

Straw shall be baled from oats, wheat, rye, barley, rice, or other coarse fiber vegetation that will percolate water. Hay baled from grass, alfalfa and clover is not acceptable.

2.3 OTHER PRODUCTS

Any products proposed for use that are not included on drawing shall be described fully, with catalog cuts and manufacturer's instructions for use, in the temporary erosion and sediment control plan. Other products, if proposed in the final plan, shall meet the following requirements:

Erosion control blankets shall meet NDDOT 856.

PART 3 EXECUTION

As between the Government and the Contractor, the Contractor shall be responsible for fulfilling the obligations of the general permit for the following sections:

Part II-C: Stormwater Pollution Prevention Plan

Part III: Effluent Limitations, Monitoring, and Recording Requirements

3.1 IMPLEMENTATION

The Contractor shall install the sediment and erosion control system in accordance with the plan submitted to the Contracting Officer. The BMPs shall be modified if inspection indicates distress to the system or reveals unforeseen circumstances, or if directed by the Contracting Officer. Any updates to the plan shall be recorded. Permanent stabilization shall be initiated as soon as practicable in any portion of the site where construction activities are complete.

3.2 MAINTENANCE

The Contractor shall be responsible for implementing and managing the erosion and sediment control BMPs before and during the construction activities; and ensure that the Plan will be implemented and stay in effect until the work has been completed, the entire work site has undergone final stabilization, and a Notice of Termination has been submitted to the Contracting Officer and the state permitting authority.

3.3 RECORDS

The Contractor shall record on CQC reports: (1) dates when major stripping and grading activities occur, (2) dates when construction activities temporarily or permanently cease on a portion of the site,(3) when permanent stabilization practices are initiated, and (4) activities associated with inspection and maintenance.

3.4 ATTACHMENTS

NDPDES General Permit NDR03-0000 with Notice of Intent (NDDOH Form SFN 19145) and Appendices 27 Pages.

-- End of Section --

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01572

CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

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SECTION 01572

CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

PART 1 GENERAL

1.1 GENERAL

Government policy is to apply sound environmental principles in the design, construction and use of facilities. As part of the implementation of that policy the Contractor shall: (1) practice efficient waste management when sizing, cutting, and installing products and materials and (2) use all reasonable means to divert construction and demolition waste from landfills and incinerators and to facilitate their recycling or reuse.

1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-18 Records

Waste Management Plan; FIO.

A specific Waste Management Plan shall be submitted in accordance with paragraph PLAN.

1.3 MANAGEMENT

The Contractor shall take a pro-active, responsible role in the management of construction and demolition waste and require all subcontractors, vendors, and suppliers to participate in the effort. Construction and demolition waste includes products of demolition or removal, excess or unusable construction materials, packaging materials for construction products, and other materials generated during the construction process but not incorporated into the work. In the management of waste consideration shall be given to the availability of viable markets, the condition of the material, the ability to provide the material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates. The Contractor shall be responsible for implementation of any special programs involving rebates or similar incentives related to recycling of waste. Revenues or other savings obtained for salvage, or recycling shall accrue to the Contractor. Firms and facilities used for recycling, reuse, and disposal shall be appropriately permitted for the intended use to the extent required by federal, state, and local regulations.

1.4 PLAN

A waste management plan shall be submitted within 15 days after contract award and prior to initiating any site preparation work. The plan shall include the following:

a. Name of individuals on the Contractor's staff responsible for waste prevention and management.

b. Actions that will be taken to reduce solid waste generation.

c. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas and equipment to be used for processing, sorting, and temporary storage of wastes.

d. Characterization, including estimated types and quantities, of the waste to be generated.

e. Name of landfill and/or incinerator to be used and the estimated costs for use, assuming that there would be no salvage or recycling on the project.

f. Identification of local and regional reuse programs, including non-profit organizations such as schools, local housing agencies, and organizations that accept used materials such as materials exchange networks and Habitat for Humanity.

g. List of specific waste materials that will be salvaged for resale, salvaged and reused, or recycled. Recycling facilities that will be used shall be identified.

h. Identification of materials that cannot be recycled/reused with an explanation or justification.

i. Anticipated net cost savings determined by subtracting Contractor program management costs and the cost of disposal from the revenue generated by sale of the materials and the incineration and/or landfill cost avoidance.

1.5 RECORDS

Records shall be maintained to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration. The records shall be made available to the Contracting Officer during construction, and a copy of the records shall be delivered to the Contracting Officer upon completion of the construction.

1.6 COLLECTION

The necessary containers, bins and storage areas to facilitate effective waste management shall be provided and shall be clearly and appropriately identified. Recyclable materials shall be handled to prevent contamination of materials from incompatible products and materials and separated by one of the following methods:

1.6.1 Source Separated Method

Waste products and materials that are recyclable shall be separated from trash and sorted into appropriately marked separate containers and then transported to the respective recycling facility for further processing.

1.6.2 Co-Mingled Method

Waste products and recyclable materials shall be placed into a single container and then transported to a recycling facility where the recyclable materials are sorted and processed.

1.6.3 Other Methods

Other methods proposed by the Contractor may be used when approved by the Contracting Officer.

1.7 DISPOSAL

Except as otherwise specified in other sections of the specifications, disposal shall be in accordance with the following:

1.7.1 Reuse

First consideration shall be given to salvage for reuse since little or no re-processing is necessary for this method, and less pollution is created when items are reused in their original form. Sale or donation of waste suitable for reuse shall be considered. Salvaged materials, other than those specified in other sections to be salvaged and reinstalled, shall not be used in this project.

1.7.2 Recycle

Waste materials not suitable for reuse, but having value as being recyclable, shall be made available for recycling whenever economically feasible.

1.7.3 Waste

Materials with no practical use or economic benefit shall be disposed at a landfill or incinerator.

-- End of Section --